United States Department of the Interior
National Park Service

National Register of Historic Places Multiple Property Documentation Form

This form is used for documenting property groups relating to one or several historic contexts. See instructions in National Register Bulletin *How to Complete the Multiple Property Documentation Form* (formerly 16B). Complete each item by entering the requested information.

__X__ New Submission _____ Amended Submission

A. Name of Multiple Property Listing

Agriculture on the Carson River in Nevada's Douglas and Ormsby Counties

B. Associated Historic Contexts

Agriculture on the Carson River in Douglas and Ormsby/Carson Counties
Barn Architecture in Carson and Eagle Valleys

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D. Certification

As the designated authority under the National Historic Preservation Act of 1966, as amended, I hereby certify that this documentation form meets the National Register documentation standards and sets forth requirements for the listing of related properties consistent with the National Register criteria. This submission meets the procedural and professional requirements set forth in 36 CFR 60 and the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation.

Rebecca Palmer — Signature of certifying official

Nevada State Historic Preservation Officer — Title

Feb. 26, 2018 — Date

Nevada State Historic Preservation Office
State or Federal Agency or Tribal government

I hereby certify that this multiple property documentation form has been approved by the National Register as a basis for evaluating related properties for listing in the National Register.

Barbara Wyatt — Signature of the Keeper

3/12/2018 — Date of Action

United States Department of the Interior
National Park Service

Agriculture on the Upper Carson River in Nevada — Nevada
Name of Multiple Property Listing — State

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E. Statement of Historic Contexts

One of the most endemic, if romanticized, components of the western American landscape is the ranch. Ranching sat alongside mining and gambling as one of the most recognizable aspects of the Nevada's economic development and heritage. In the corridors along early overland transportation routes established in the 1850s, ranching was frequently the first industry to take root, with ranchers squatting on land occupied by native people including the Washoe, Numu, and Newe. Ignoring native claims to the territory, new settlers adopted a land use doctrine described by Nevada historian James Hulse as an alodial system in which those who used the land (in a manner consistent with Euro-American land use practices) laid claim to it, regardless of patents or agreements from a government authority. Such a strategy allowed ranchers to seize territory for ranching, becoming willing partners alongside miners in Nevada's ongoing economic development. As mining towns sprung up throughout the state, farmers and ranchers established operations along nearby creeks and rivers and provided goods and supplies. For many of Nevada's rural communities, the dependence on ranching or mining income, or both, is still a central component of their economies.[1]

Nevada's landscape, environment, and political culture contributed to the success of ranching. Defined by broad valleys and long mountain ranges extending north-south across the state, Nevada is predominantly arid. Seated in the Great Basin, both in the rain shadow of the Sierra Nevada mountains and with most of the waterways flowing through Nevada not reaching the sea, the state is mostly desert or sagebrush steppe, punctuated by dry lake beds and dramatic mountain ranges. The mountains capture snowfall in the winter that provides most of the region's water supply, and sustain piñon, juniper, and pine forests. Because of the region's arid nature, large-scale private ownership is generally economically infeasible due to the high cost and low returns of owning large acreage in this high desert. As a result, just over 80% of Nevada is owned by the federal government, most of that being under the oversight of the Bureau of Land Management. The vast acreage of the federal government in Nevada means that the majority of the state's territory is rural. As such, like several western states, cattle and sheep ranching became the most strategic use of much of these public lands, creating a unique relationship between ranchers and the federal government that has fluctuated, sometimes dramatically, over the last century and a half.[2]

The region of Nevada that is the subject of this MPDF is situated east of Lake Tahoe where the Carson Range of the Sierra Nevada drops into the Carson River watershed, specifically along the middle portion of the Carson River as it enters Nevada from its headwaters in California. The valleys through which the Carson River runs as it leaves the Sierra Nevada Mountains are a primarily agricultural landscape that includes some of the earliest settlements in Nevada, nestled against the eastern foothills of the Sierra Nevada. The landscape is dominated by two main valleys: Carson Valley to the south and Eagle Valley to the north. Both are well-watered by snowpack from the Sierras that runs into tributaries of the Carson River starting in Eldorado, Alpine, and northern Mono Counties in California. The snowpack that feeds the upper Carson River supplies ample water for a robust and agricultural landscape that is relatively unique in Nevada. The cultural landscape of ranching and farming on the upper Carson River stretches from the alpine reservoirs along the Carson Range of the Sierra Nevada Mountains downward to the north and east through the California farming communities of Woodfords and Fredericksburg, through Douglas County in Nevada and into Carson City (formerly Ormsby County). The Carson River continues through Storey and Lyon Counties before emptying into the Carson Sink in eastern

[1] John M. Townley, *Alfalfa Country: Nevada Land, Water & Policies in the 19th Century*, (Reno: Agricultural Experiment Station, Max C. Fleischmann College of Agriculture, University of Nevada, Reno, 1980), 1; James W. Hulse, *Nevada's Environmental Legacy: Progress or Plunder*, (Reno & Las Vegas: University of Nevada Press, 2009), 1-2.
[2] Congressional Research Service, *Federal Land Ownership: Overview and Data*, by Carol Hardy Vincent, Laura A. Hanson, and Jerome P. Bjelopera, Report #42346, Washington, D.C., 2014, 4 https://archive.org/details/R42346FederalLandOwnershipOverviewandData-crs, accessed Nov. 23, 2016.

Churchill County. Although Carson and Eagle Valleys are still arid, receiving around 11 inches of total precipitation per year, the snowmelt from the Sierras charges the Carson River and valley water table with enough water to sustain intensive, irrigated farming on a much broader scale than elsewhere in Nevada. The availability of water from snowmelt has often led to periodic flooding of the Carson River watershed in winter and spring months when melting snow fills and overflows the river's banks. These two valleys also share a common history in the historical foundations of Nevada and its agricultural development, much of which remains visible today. Where Mormon farmers first dug ditches and laterals into their pastures and orchards in the 1850s, modern farmers largely continue those practices, albeit with new crops and livestock, and new markets driving their production.[3]

Ranching and Irrigated Farming in Northern Nevada: An Overview

Farming and ranching have been central to the image and the economy of the American West and the state of Nevada since the mid-nineteenth century. In western states such as Nevada, a combination of federal land use policies, agrarian politics established in the early nineteenth century, and environmental realities combined to create a unique economic landscape in which private ranchers relied on access to public, regulated lands to sustain large-scale ranching operations. This was a significant departure from federal land use policies established after 1785 that emphasized the distribution of the public domain into private hands via small land grants. Western ranchers stood in contrast to the classic American image of yeoman farmers and relied on larger private holdings and public subsidies through range management, largely as a result of the American West's arid environment that rendered the traditional small farm model impractical. Even in the relatively well-watered Carson and Eagle Valleys, farming was generally devoted to pasture and hay crops, with the raising of livestock being the dominant economic activity. What little farming did take place was often dependent upon local markets and influenced by highly variable seasons. Farmers in the 1860s who had cultivated vegetable crops and fruit orchards in the 1860s struggled to keep their crops alive amid early frosts and fluctuating markets. Even here, water and grassland was not so abundant that ranchers could make do without summer ranges on public lands in the Sierra Nevada and Pine Nut mountain ranges. As with all things related to agriculture in Nevada, access to water governed how farming and ranching developed.[4]

Far from simply an economic activity, ranching and farming in the west imbued its practitioners with a particular culture that affected both the management of livestock and the landscape itself, from the land use patterns of ranches to the architecture of their buildings. The ranching culture of the western United States is immensely diverse, but emerged from two dominant bases: Texas and California. In Nevada, California-based traditions and practices established by Spanish and Mexican ranchers generally dominated. However, the early settlement of Carson and Eagle Valleys by those of English or German descent created an enclave of English and German cattle traditions farther west than the usual reach of these practices which tended to be concentrated in northeastern Nevada and farther east, and that emphasized controlled pasture and public commons. Most ranching in Nevada adopts a particular seasonal schedule, with early spring dedicated to calf branding and marking, and cattle usually turned out soon after onto public grazing allotments. At the same time, hayfields are tilled under and replanted, and gardens, if present, planted near main ranch houses. Summer usually entails harvest of the first crop of hay in July, which is brought in for storage, with a second crop being grown if sufficient water rights allow. In many environments in Nevada, grazing of cattle transitions through various

[3] U.S. Department of Agriculture, Soil Conservation Service, *Water and Related Land Resources, Central Lahontan Basin – Carson River Subbasin, Nevada – California*, Carson City / Minden, Nev., 1973, 3-4.
[4] Paul F. Starrs, *Let the Cowboy Ride: Cattle Ranching in the Western United States,* (Baltimore: Johns Hopkins University Press, 1998), xv; Leisl Carr-Childers, *The Size of the Risk: Histories of Multiple Use in the Great Basin,* (Norman: University of Oklahoma Press, 2015), 23; James W. Hulse, *The Silver State: Nevada's Heritage Reinterpreted,* (Reno & Las Vegas: University of Nevada Press, 1991), 133.

eco-zones throughout the year in a pattern established long before the presence of federal land management agencies in the region. With the year beginning in spring, ranchers often begin grazing their livestock in private pasture, but move quickly to Bureau of Land Management (BLM) tracts on the valley floors. They then move their stock and spend a significant portion of the summer on allotments in the mountains, most of which are now managed by the U.S. Forest Service (USFS). At the beginning of the fall, depending on conditions but usually between late August through November, ranchers return their cattle to a central Farm/Ranch Complex where they are finished (fattened for market) on privately-owned pasture or on baled hay stored in stacks or barns. It is during the fall that most animals are culled from the herd for sale.[5]

Paving the way for this ranching landscape was the conquest and settlement of the American West by the United States. Nevada itself was initially claimed by Spain, and later Mexico, but became part of the United States following the Treaty of Guadalupe Hidalgo in 1848 that ended the war between the United States and Mexico. The treaty transferred much of the present-day American West from Mexican to American control, including most of the future states of Nevada, California, Arizona, New Mexico, Colorado, and Utah. Due to the geographic barriers of the Utah desert, the Colorado River, and the Sierra Nevada Mountains, the Spanish and Mexican presence in Nevada had been minimal and temporary, with the most permanent Spanish cultural centers established along the California coast and along the Rio Grande River in New Mexico. Although the Spanish sent missionaries and traders into northern Nevada to interact with the Washoe and Paiute, their presence was temporary. The discovery of gold in California in 1849, coupled with the establishment of the Mormon state of Deseret in 1847, provided the first impetus for settlement in what would become Nevada by citizens of the United States.

In these early years of settlement, the location of agricultural operations depended heavily on the mining industry. Like much of the Great Basin, the climate is arid and early explorers in the future state recognized that poor soils and slight rainfall would provide persistent challenges to any long-term agriculture. Nevada's first agricultural success preceded the mining rush to the area, occurring while the region was still western Utah Territory. Throughout the 1850s, stations and ranches developed on overland trail routes along the Humboldt, Truckee, and Carson Rivers, with station operators supplying hay to travelers, at first relying on native grasses in fields irrigated by rudimentary ditches. However, after the discovery of the silver Comstock Lode in 1859, the trend in Nevada's agriculture was that farms and ranches closely followed ore discoveries, seeking to provide supplies for mining and milling towns nearby. Ore discoveries in the 1860s from Humboldt County south to Esmeralda relied on California ranches for most of their beef supplies, but a drought in 1864 pressed most of their herds into western Nevada, revealing the grazing possibilities of the northern part of the state. Farms and ranches developed in earnest throughout northwestern Nevada along the Carson, Truckee, Humboldt, Walker, and Reese rivers. In most cases, choice bottom land went quickly, with native grasses such as Great Basin Wildrye (*Leymus cinereus*) supplying hay for livestock. However, as ranchers depleted the native grasses, they typically planted grains such as wheat or barley and constructed irrigation networks to provide sufficient water. After 1863, most farmers began incorporating alfalfa into their hay fields as a well-performing crop in Nevada's alkaline soils. Hay farms proved critical to Nevada's early economy as one of the only sources of energy for the livestock that moved overland travelers to Oregon and California, and moved silver and gold ore

[5] Starrs, *Let the Cowboy Ride*, 5-6; Howard Wight Marshall, *Paradise Valley, Nevada: The People and Buildings of an American Place*, (Tucson: University of Arizona Press, 1995), 11, 13-16; Mary Ellen Glass, *Fred H. Settelmeyer: Recollections of Ranching in Carson Valley, Work as a Nevada State Senator, and Involvement with Western Water Problems*, (Reno: University of Nevada, Reno, Oral History Program, 1971), 16.

from mines to mills and markets. This rapid development of ranches between 1860 and 1880 gave Nevada's agricultural landscape much of the shape it takes on today.[6]

In most cases, those who arrived and established farms and ranches found their ownership of the land upon which they settled in question until the late 1860s. A lack of consideration for native claims to the land, and lack of treaties between the U.S. government and either the Washoe or Northern Paiute, led the first settlers to simply squat on choice land as they saw fit. Military conflict between the Paiute and Washoe and the federal government was brief, as troops out of Forts Churchill and Ruby among others brutally suppressed resistance, most notably during the campaigns of the 1860 Pyramid Lake War. Although an alliance of Paiute, Shoshone, and Bannock scored early victories in this conflict, by the end of the year, combined federal troops and militia had defeated most northern Nevada tribes in a series of battles and massacres along the overland trails. Mormon settlement during and prior to this conflict brought some organization, but it was not until Nevada's entry into the union as a territory in 1861 that land ownership within Nevada's borders took shape. Under territorial governance, most land law, survey, and distribution was left to the federal Land Office. However, as part of Nevada's transition to statehood, the federal government ceded approximately 4.5 million acres to the state government, 660,000 to be sold to finance internal improvements, and 3.9 million to be sold for the support of local school districts. The state took on a strong role in land sales, with the federal government delegating the task of processing existing claims and withdrawals to the state completely by 1867. Murky land law prior to the state's establishment, and significant deregulation of the state's land sales system, allowed many farmers and ranchers who had not already done so to consolidate a great deal more land under their ownership than many of the federal land laws had intended. Most of the choice land within these transfer areas had either already been claimed prior to that year and were awaiting formal survey, or were claimed quickly thereafter under loosened state regulations to encourage settlement and raise revenue for the state's small education fund, putting most of that 700,000 acres in private hands by 1871. In 1880, recognizing that many of the 1862 Morrill Land Grant sections given to the state to fund school districts could not be sold to farmers due to lack of water, a land deal between Nevada and the federal government traded and transferred two million acres of higher quality land to the state. This accelerated additional land sales through the 1880s and 1890s. By 1902, with the Reclamation Act on the horizon, most of the available land for settlers was marginal at best, and often overgrazed or stripped of timber.[7]

However, the completion of the Central Pacific Railroad across northern Nevada in the 1860s created economic challenges for area farmers and ranchers. Reduced costs of long-distance transportation meant that the market for hay declined drastically. Trains provided the transportation services that horse and ox-drawn wagons had before, compelling many western Nevada ranchers to switch from hay to beef production as their primary hay buyers, teamsters, and wagon companies, left the market. Beef production had actually begun earlier in the 1850s to supply local and California markets, but dual factors created a vacuum in the agricultural market that beef cattle filled. First, the mining boom in Nevada's northern regions compelled many California ranchers to add or shift operations across the Sierra Nevada in response to the new demand for beef. Furthermore, increased access to larger market areas along the west coast provided by railroad lines made it easier for smaller ranching operations to get their cattle to buyers in larger cities such as Sacramento, San Francisco, and Chicago. Farmers in Nevada also irrigated fields for produce, especially potatoes that became renowned on the west coast in the 1860s. However, in sheer volume, hay and pasture remained the dominant agricultural activity in the state.[8]

[6] Carr-Childers, 9; Townley, *Alfalfa Country*, 19-24; James A. Young and B. Abbot Sparks, *Cattle in the Cold Desert*, expanded edition, (Reno & Las Vegas: University of Nevada Press, 2002), 48.
[7] Townley, *Alfalfa Country*, 2-4, 46, 48; Hulse, *The Silver State*, 137.
[8] Townley, *Alfalfa Country*, 19-20, 23.

Press coverage during the nineteenth century emphasized Nevada's mining economy, meaning that mining exercised more political power and attracted more financial investment throughout most of the state. The few exceptions to these imbalanced popular perceptions were concentrated in three Nevada counties: Elko, Humboldt, and Douglas. Settlements along the Humboldt River in particular experienced massive expansion during the 1860s, including the development of farms and ranches from Paradise Valley and Winnemucca to Elko and Wells. During the same period, cattle ranchers moved into the Lahontan Valley along the lower Carson River, raising livestock and growing hay crops, largely aimed at Virginia City area markets. Some of the most rapid agricultural development in Nevada occurred in Washoe Valley and the Truckee Meadows, also largely supplying Virginia City area markets. It would take the precipitous decline of precious metals mining in the state after 1880 for most Nevadans to recognize the quiet establishment of a strong and relatively stable ranching economy along the Carson, Truckee, and Humboldt River basins. As markets in Nevada mining towns declined, farmers and ranchers took advantage of the completion of the transcontinental railroad to create a lucrative winter feeding industry in western Nevada for California and eastern Nevada ranchers. Although Douglas and Ormsby Counties never commanded the state's agricultural economy, they also never commanded the vast acreage contained within the borders of Humboldt or Elko counties. In 1873, the State Surveyor-General documented that while Douglas County led the state in acres cultivated at 18,503, it produced only 8,000 tons of hay and 18,800 bushels of grain in that year, in part due to the use of most acreage for pasturage rather than harvest. As a comparison, Elko County had 15,000 acres in cultivation, producing 15,000 tons of hay and 219,800 bushels of grain. Humboldt County came in a close second in production with 10,000 acres cultivated, producing 6,000 tons of hay but 150,350 bushels of grain. Both Elko and Humboldt Counties had significantly more acreage in their boundaries that could be used for open range grazing than that found in the narrower valleys near the eastern Sierra Front. As a result, northeast Nevada continued to dominate both livestock and grain crop production in the nineteenth century.[9]

The ranchers who arrived in Nevada in the mid-nineteenth century generally brought with them livestock with which they were already accustomed, being unfamiliar with the unique and harsh climate of the western Great Basin. Many early travelers to California and Oregon in the 1840s and 1850s drove British Devons and Shorthorns, cattle acclimated to wet environments with lush pasture, of which there was little in Nevada and California. The need for pasturage propelled some of the earliest irrigation projects in Nevada's valley bottoms. With the completion of the transcontinental railroad in 1869, ranchers from Elko south to the Old Spanish Trail began introducing alternative varieties, including the Texas Longhorn, a wild Mexican cattle variety known for its hardiness in desert climates and resistance to disease. The Longhorn was especially suited to the Spanish ranching traditions so popular in much of Nevada, which turned out cattle on their own, with periodic collection for market sale or slaughter. Nevada ranchers with little land to irrigate for pasturage looked at this breed as an opportunity to produce wealth from the state's sparse ranges. However, the Longhorn proved a poor choice for Nevada's relatively harsh climate, succumbing easily to the colder temperatures of the state's high desert. By the 1870s, Durham shorthorns became a popular if short-lived import, especially in the northeast part of the state. By the end of that decade the larger Hereford variety, developed in Herefordshire, England and a popular beef cattle in the western United States, began to supplant the smaller Durham cattle, a transition that has held into the present. Although many ranchers resisted Herefords as they were not purebred and had an unclear pedigree, they proved well-suited for Great Basin ranching, being tolerant of drought, summer heat, and winter cold, and known for early maturation and their ability to spread out over large ranges to find food and water rather than bunching together. Another late addition to the western ranges was the Angus, developed in northern Scotland and imported to Canada around 1860. The Angus was popular for its stocky frame and high-quality

[9] Townley, *Alfalfa Country*, 6, 10, 24, 32-33.

beef, leading many western American ranchers to cross breed it with the Hereford, creating the well-known Black Angus Hereford variety.[10]

Sheep ranching began similarly to cattle ranching, with itinerant ranchers, many of them Basques, driving sheep across the Sierras from California into northern Nevada's open range in the nineteenth century. Sheep ranchers brought both Churras sheep and the more renowned, if less common, Merinos, eventually crossbreeding them to combine the fine wools of the latter with the hardiness of the former. As with cattle, the completion of the transcontinental railroad provided increased access to Nevada's grazing areas, with California sheep raisers moving and expanding their stock into Nevada rangelands. Propelled by a severe drought in California in 1870, sheepherding in many counties began to rival cattle ranching, raising concerns about armed conflict between competing graziers. Between 1872 and 1873, Nevada's annual wool clip increased from 100,000 to 300,000 pounds, signaling a massive influx of sheep. The lack of any fencing laws in the state made Nevada an ideal place for graziers of both sheep and cattle, leading to the acquisition of most suitable grazing land by private interests by 1873. Although the regulation of public ranges after the Forest Reserve Act of 1891 and the Taylor Grazing Act of 1934 pushed many itinerant ranchers out of business, many chose to homestead parcels and transitioned to a combination of permitted grazing on public ranges and pasturage on privately held lands.[11]

In most counties where farmers and ranchers established irrigated cropland, alfalfa remained the primary irrigated crop, as it provided nutritious feed for livestock and thrived on Nevada's mostly alkaline soil and harsh climate. Alfalfa (*Medicago sativa*) originated in southwestern Asia and traveled to Europe via trade routes well before the colonization of the Americas. Introduced to the American continents by Spanish settlers, the crop thrived in dry, irrigated environments but failed experiments by American farmers such as George Washington and Thomas Jefferson to adapt it to east coast farming. Successful Spanish farmers brought the plant north from Chile into California by the 1850s, where it spread into the western states and became a staple crop throughout much of the United States' pasturelands. Throughout the 1890s, the U.S. Department of Agriculture experimented with alfalfa, eventually cultivating varieties that could thrive in more extreme regions in both the northern and southern portions of the country. Potatoes and grain had a small market in California and nearby mining towns as well. However, the limits of economic competition, and a strong culture amongst Nevada agriculturalists against crop production, kept the state's agricultural landscape primarily in beef. Where attempts to establish small family farms via irrigation projects in the state moved forward, historian John Townley notes that these proponents often misinterpreted trends in other states that saw agricultural success from irrigation projects. The detail they appear to have missed was the trend of these very projects generally fostering the concentration of land under fewer owners and tenant farming rather than the espoused ideal of Jeffersonian yeoman farmers. What is clear is that Nevada's agricultural landscape featured a close relationship between irrigated farming and stock-raising.[12]

As ranchers transitioned to irrigated hay and alfalfa production in the late-nineteenth century, practices transitioned toward more mechanical, industrial farming techniques. Nevada ranchers learned by the 1860s that alfalfa thrived on light irrigation in sandy soils, generally where tall sagebrush stands were already established. Ranchers frequently burned off the sagebrush stands, and then used disks to break up and level the soil for planting. Leveling after disking using graders was especially important for alfalfa crops as new alfalfa seedlings typically die if over-watered. The impacts of this in many of Nevada's alfalfa-heavy agricultural areas is apparent, with valley bottoms in intensively farmed areas being relatively devoid of dramatic topography with a

[10] Walton-Buchanan, 5-8, 37-38; Alan L. Olmstead and Paul W. Rhode, *Creating Abundance: Biological Innovation and American Agricultural Development*, (Cambridge: Cambridge University Press, 2008), 321.
[11] Walton-Buchanan, 9-11, 37-38.
[12] Townley, *Alfalfa Country*, 6, 10, 19; Olmstead and Rhode, 277-278.

surprisingly flat profile, an indication of 150 years of cultivation of alfalfa. This may have prevented serious side effects related to irrigated agriculture, such as water-logging, that plagued other irrigated desert environments in Nevada such as in the Lahontan Valley after 1905. The need for irrigation meant that engineers capable of designing massive irrigation systems possessed a highly sought-after skill. As a result, engineers, either professional or self-taught, became some of the most prominent citizens in these early agricultural communities. As irrigation engineers progressed and refined their techniques into the early twentieth century, they began to inform the smaller aspects of effective irrigation systems, often through government publications that were transmitted throughout the local and regional farming community.[13]

These irrigation systems supported a variety of crops in addition to alfalfa to make hay, the mainstay of much of Nevada's agricultural landscape. Once mature, the various grass mixtures and clovers used to produce hay were cut in the field using various kinds of reapers. Then a hay rake would push the cut hay into linear piles called windrows. After the hay dried sufficiently, a hay loader scooped up the loose hay and dumped it onto a portable conveyor belt that loaded the hay onto a wagon, sent to a barn or to the nearest haystack. Baling machines, added in later years, removed the need for haystacks and allowed for denser piles of hay bales, which remain the norm for storing hay into the present. Farmers and ranchers had to take care to let hay dry properly. Overly wet hay would ferment and rot, becoming poisonous to cattle. Slightly drier, and the hay still carried a risk of spontaneous combustion. For this reason, it was (and still is) common for farmers to leave hay bales in the field for several days after baling to ensure the hay can cure appropriately. Appropriate stacking that uses waterproofing and compression to force-dry the hay was also a common method, leading to the use of "beaver slides" in Montana and Wyoming to build haystacks. In Nevada and Utah, hay derricks were more common, stacking loose hay into piles that could contain several tons of hay. If farmers chose to store their hay in a barn, the Jackson hay fork, a common feature on barns in Carson Valley, was a useful, if unreliable piece of equipment that made loading hay lofts much easier.[14]

Alongside hay production, grain and produce farming increased steadily on most ranches beginning in the 1860s. Farmers and ranchers typically grew small fields of wheat for family consumption or for sale in local markets, as shipment to Sacramento or San Francisco was too expensive. Orchards, berry vines, and root crops were equally popular to provide subsistence but also sale to local mining markets. The 1874 Surveyor General's report, the first year in which reliable farming estimates were available from each of the counties, enumerated crop estimates as follows:

1874 Crop Estimates in Nevada			
Crop Variety	Acres Sown	Yield in bushels / acre	Total yield in bushels
Wheat	4,346	17	76,300
Barley	26,654	20	506,790
Oats	5,372	14	74,695
Rye	100	10	1,000
Corn	493	28	13,690
Buckwheat	12	17	200
Peas	326	101	3,450
Beans	53	14	593
Potatoes	4,136	70	290,458

[13] Walton-Buchanan, 99-100; J.C. Guitjens, "Science, Technology, and the Consequences of Water Development for Irrigation of the American West," in *Western Technological Landscapes*, Stephen Tchudi, ed., (Reno: Nevada Humanities Committee, 1998), 95.
[14] Walton-Buchanan, 100-101.

Sweet Potatoes	¼	96	24
Onions	76	55.5	4,210
Hay	72,101	1	72,101
Hops	1	125lbs	
Beets			314 tons
Turnips			320 tons
Pumpkins & Squashes			5,350 tons
Butter			227,240 lbs
Cheese			22,200 lbs
Wood			668,738 lbs
Honey			7,400 lbs

Farmers often milled their grain in local grist mills that were either animal or water-powered, including one of the first in Nevada established at Mormon Station by 1858 along Genoa Creek. The first farmers used hand scythes to cut their wheat crops. After railroads connected Carson City to broader markets, horse-drawn reapers sped up the cutting process. Steam-powered threshers separated the grain from the stalk, with the grain going to flour, and the stalk (or straw) going to livestock bedding or mulch in gardens. The largest ranches had their own equipment and crews. Some ranchers maintained their own equipment and called in neighbors to aid with the harvest. Companies that brought their own equipment and crews for hire out to ranchers were also common.[15]

Despite successful agricultural development in Nevada over the course of the 1860s and 1870s, competition with national producers and reliance on mining town markets that were in serious decline by 1880 meant that the state's agricultural industry faced severe challenges in the last two decades of the nineteenth century. In an effort to reduce production costs, Nevada's ranchers sought a degree of economic autonomy from California business leaders by shipping their stock live on rail cars to slaughterhouses in California cities. They found themselves in competition with the Wholesale Butchers Association, a San Francisco-based cooperative which held a monopoly on beef sales in California's retail outlets and sought to prevent cattle-raisers from selling directly to the Association's clients. Ranchers in Winnemucca and Reno constructed large slaughterhouses to allow them to ship greater volumes of meat by shipping carcasses packed in ice, and to sell directly to retailers. However, pushback from the Butchers Association forced Nevada cattlemen out of the direct sale of their livestock, compelling a return to live shipping and slaughter for local markets, which were dwindling along with declining returns from the state's mines. Failed efforts on the part of the state to participate in the federal Swamp Lands Act of 1850, specifically targeted at the Humboldt River basin, and the subsequent initial failure of the federal Desert Lands Act of 1872 to develop reclaimed areas in the west for family farms, further strapped Nevada's farmers and ranchers.[16]

The increasing economic pressure on Nevada's agriculturalists propelled two concurrent trends in the state's agriculture, namely an increase in livestock production and a drive for self-sufficient agriculture through intensive farming. This trend combined with severe drought in the 1880s and an especially severe winter in 1889-1890 to compel western leaders including Nevadans to create a new model of agriculture for the west dependent on reclamation and irrigation. In the early 1880s, rising beef prices and falling hay prices created a national boom in the beef industry as stock herders expanded their herds. In Nevada, competition for grazing land became severe, as the loose state land sale laws of previous decades had allowed ranchers and farmers to amass large tracts of land before the so-called beef bonanza began. However, overproduction by 1886 led to a

[15] Walton-Buchanan, 104-105.
[16] Townley, *Alfalfa Country*, 39, 49-54.

severe decline in beef prices. This combined with overgrazing throughout much of the American West that reduced forage for livestock throughout the region. Although absentee or itinerant grazing also played a role, Nevada ranchers over-inflated this particular factor as a means to compel action against Basque, Hispanic, and other non-white ranching interests. An 1886 article in the *Carson Morning Appeal* described the increasing stress on Nevada's ranges, observing that "The natural grasses are hardly sufficient to winter the cattle now growing in this State, and unless grass is made to grow artificially it means that the limit of cattle production in Nevada has been reached." With the ranges becoming stressed, ranchers began to transition their practices in the face of new biological and administrative limits. Early ranchers had simply grazed sheep and cattle year-round, sustaining winter pastures through diverting drainages into bottomlands. If any hay was cut at all, it was placed in haystacks until such time as livestock needed it before the spring. Many farmers in the more arid regions of the state were reluctant to construct barns for hay storage due to the minimal availability of lumber and lack of rain that made shelter necessary.[17]

Overgrazing, combined with drought and harsh winters in the late-1880s, led to massive losses among livestock raisers throughout the American West. Some ranchers in Nevada lost up to 40 percent of their cattle in the winter of 1887-1888 alone. Contemporary sources seemed aware that the actions of Nevada's graziers were a significant contributor to the loss of adequate feed in the state's grasslands. The *Reno Evening Gazette* noted in 1887 that "The present winter experience will be a lesson to many of our stockmen and a new order of things will be inaugurated in the future. More hay to feed and sheds to shelter and protect cattle will be the shibboleth of the leading spirits who control this important interest of Eastern Nevada." Many private companies had begun storing water and increasing their feed crops by this time in the hopes of abating the combination of stressors. Others drove their cattle to other feeding areas ranging from Idaho to the Truckee Meadows, with varying degrees of success. The failure of many larger operations left a vacuum in the market filled by many smaller-scale outfits trying to enter the beef or wool industry. Despite the continued stress on Nevada's ranges, livestock producers did not significantly alter their grazing practices, precipitating a transition in the biotic community from native, predominantly nutritious grasses to both native and non-native invasive species that did not have the same nutritional value. As a result, some agriculturalists adapted their ranching strategies to include more irrigated pasture for winter feed, bringing cattle off the range near winter so they could be protected and cared for until spring. During much of this period into the early 1900s, it was common practice for cattle and sheep ranchers to burn mountain grazing land in the fall, both to drive their livestock down into winter pastures and to clear the summer pastures of woody growth, allowing for grasses to colonize and rejuvenate. However, the arrival of invasive species by the late-nineteenth century meant that native, nutritious grasses lost ground in the burned areas to these colonizing plants, limiting the grazing capacity of the range. The stress applied to the forage resources of Nevada compelled the state legislature to pass several laws in an attempt to curb indiscriminate use of the range, including levying special taxes against itinerant graziers, predominated by Basque sheep herders and conglomerate stock raising companies.[18]

The rising environmental stressors on the range meant that Progressive Era reforms in Nevada frequently focused on scientific range management, crop science, and mechanization in the agricultural industry. As early as 1901, P.B. Kennedy, a botanist with the Nevada Agricultural Experiment Station, observed that most of the

[17] *Carson Morning Appeal*, December 4, 1886, p2, in Townley, *Alfalfa Country*, 63; James A Young and Charlie D. Clements, *Cheatgrass: Fire and Forage on the Range*, (Reno & Las Vegas: University of Nevada Press, 2009), 30; Townley, *Alfalfa Country*, 62-63.

[18] DCNR-HP&A, Rowley, pp6-7; Walton-Buchanan, 96-99; Young and Clements, 44-47, Townley, *Alfalfa Country*, 63-64, 107; U.S. Department of Agriculture, Natural Resource Conservation Service, "Medusahead," by M.E. Stannard, D.O. Ogle, and L. St. John, 2010, http://plants.usda.gov/plantguide/pdf/pg_taca8.pdf, accessed September 22, 2016; U.S. Department of Agriculture, National Agricultural Library, "Canada Thistle," 2016, https://www.invasivespeciesinfo.gov/plants/canthistle.shtml, accessed December 12, 2016; *Reno Evening Gazette*, September 9, 1887, p2, in Townley, *Alfalfa Country*, 107.

state's ranges had been overgrazed by cattle and sheep. Kennedy began advocating for closer range management over the next decade, stating that the rangelands could be restored if a form of crop rotation with more limited grazing and rotation of grazing areas was implemented. Such ideas found support among the newly founded Bureau of Forests under Gifford Pinchot, and in the administration of President Theodore Roosevelt. Both federal leaders viewed much of the west as unsuitable for farming, and found allies in cattle ranchers who were often at opposition to irrigators over the best use of public lands. Cattle ranchers frequently opposed state and federal reclamation efforts, especially those that imposed small acreage limits on those who could receive water from them, fearing the loss of their rangelands and water rights to crop farmers. However, in Nevada, cattle and sheep ranchers' steadfast reliance on pasture and irrigated crops softened this tension somewhat, as irrigation projects under the right circumstances provided more water for pasture and hay than it did for produce crops. Furthermore, many agriculturalists looked to a new system of university-based experiment stations to test new varieties of crops that might be more resilient and provide nutritious feed for their cattle. Created by the federal Hatch Act of 1887, a system of agricultural research centers in all states experimented with new crop varieties and land management techniques that, if proven useful, became part of a robust series of federal publications circulated to farmers and ranchers to support their operations. In Reno, the Nevada Agricultural Experiment Station at the University of Nevada in Reno made attempts to adapt crop and livestock practices to the harsh and arid climate of the state. Many experiment stations tested imported grain varieties such as crested wheatgrass (*Agropyron cristatum*) and Siberian wheatgrass (*Agropyron fragile*) as candidates to withstand variable temperatures and the region's drastic seasonal shifts. However, the importation of new seed varieties also meant the arrival of some of the region's most notorious non-native invasive species, such as cheatgrass (*Bromus tectorum*), Russian thistle (*Salsola kali*), Canadian thistle (*Cirsium arvense*), and medusahead (*Taenatherum caput-medusa*). These plants were adept at surviving in harsh environments and colonizing soil that had been disturbed by plowing or trampling, and took over large areas of what had formerly been ample grazing land. Such overgrazing also precipitated the expansion of native forbs such as sagebrush (*Artemisia* sp.) and rabbitbrush (*Ericameria nauseosa*).[19]

Despite the environmental stress on agricultural interests, the massive failures of the state's mining industry in the 1880s as ore gave out and silver prices dropped allowed farmers and ranchers to win important gains in water law, including the establishment of prior appropriation rights along the Humboldt and Truckee watersheds. To meet the immediate needs of ranchers in 1889, the state legislature authorized $100,000 for the construction of the state's first reservoir system on the upper Carson River. Approval was gained in a negotiation with Washoe County-area legislators for a bill that, once approved, established prior appropriation water rights within the state until the 1891 legislature repealed both bills under pressure from established ranching interests. Many of the larger ranchers had invested considerable expense in capturing water in private reservoirs on their property, a process which led to severe over-appropriation along waterways that would have been aggravated by state projects. Continued efforts by the legislature went so far as to seek a state boundary adjustment with California to include ideal reservoir sites for the Carson, Truckee, and Walker Rivers, situated on the upper portions of each river in the neighboring state. However, an 1889 delegation of Nevada officials to the California legislature found their proposal rejected.[20]

Adding to the desperation was an ironic arrival of precipitation in the region with heavy snowfalls blanketing Nevada in the winter of 1889-1890. However, the cold temperatures and poor winter forages and feed supplies led to severe losses in Nevada's livestock herds, with some ranchers losing almost their entire herds. Aggravated by drought, by 1891, Nevada farmers and ranchers had lost 40% of all their range cattle, 30% of all their horses, and 45% of all of their sheep. The massive die-off of livestock devastated the ranching industry in

[19] Hays, 62-65; Paul L. Tueller, "Rangelands in the Silver State," in Tchudi, *Western Technological Landscapes*, 122.
[20] Townley, *Alfalfa Country*, 75-76, 79-80, 112-113, 115, 122-123.

Nevada temporarily, but actually provided some respite for over-taxed grazing lands, as the state legislature shifted its attention to the revival of the state's floundering mining industry. This forced many of the state's agriculturalists to find their own way to address the economic shortcomings of the industry. Flour milling and dairying became popular alternatives to consume the oversupply of hay and grain that plagued many of the state's farms and ranches into the 1890s. The state's first "Buy Nevada" campaign emerged out of Reno, as H.H. Beck, the operator of Reno's Riverside Mill, pressed for self-sufficiency in the flour trade. His successful campaign led to the construction of mills throughout northwest Nevada in the 1880s and 1890s.[21]

Dairying especially became western Nevada's response to the need for diversification and drive for self-sufficiency in the 1890s, concentrated in the Truckee Meadows, Carson Valley, and Mason Valley. However, the state's rise as a dairy producer still depended on California markets, with ranchers processing their milk into other products, mostly butter, and shipping it by rail to California distributors and retailers. Some larger dairy ranchers purchased their own creamery equipment, but most established cooperatives to collectively purchase equipment and manage dairy processing. In general, 100 pounds of milk produced 4 pounds of butter, with the remaining skim milk becoming feed for hogs, creating a small but vibrant pork industry in the northwest portion of the state. Generally, the phenomenon of dairying remained isolated to a roughly 50-mile buffer around the Virginia & Truckee and Southern Pacific railway corridors, with the rail lines providing critical market access for perishable dairy goods. As a result, Nevada producers still found themselves dependent on out-of-state markets due to declining population within the state, leading to the increasing specialization of the state's agriculturalists. Where dairy did not dominate, beef production for California and Utah buyers became the mainstay. While some farmers experimented with the viability of crops such as potatoes and grains, livestock and feed became the mainstay of most producers. Mormon settlements in southern Nevada along the Virgin and Muddy Rivers became the only farming landscape that maintained success in growing diversified crops for local use. The reliance on agriculture for economic activity led the Nevada legislature to spend a great deal of effort attempting to create a state reclamation system to maximize irrigable acreage within the state. However, these attempts either failed to pass due to resistance from large cattle operations within the state, or suffered bungled implementation, leading to increased calls for a federal solution to the state's agricultural woes.[22]

As part of the reinforcement of the agricultural industry and transition to more pasture-based livestock practices, many western ranchers allied as part of a push for management of the public ranges. Despite the prevalence of private irrigated pasturage in Nevada ranching operations, ranchers generally still relied on transhumance practices to provide summer forage for their stock. Competition between property-owning ranchers and itinerant ranchers compelled many ranch owners to press the federal government for an agency to manage public ranges by permit. Combined with other interests concerned with watershed protection and excessive logging, the ranchers' efforts culminated in the General Land Law Revision Act, passed by Congress in 1891 which included provisions to create forest reserves throughout the country. It also created an oversight agency that would ultimately be known as the U.S. Forest Service. Land-owning ranchers throughout the west sought the creation of National Forests to ensure that watersheds and grazing resources were preserved for annual use. Although the outward expression of this advocacy was to protect mountain grazing resources for all users, most land-owning ranchers sought to push itinerant ranchers, many of them of Basque descent, out of the stock-raising business.[23]

[21] Townley, *Alfalfa Country*, 125-127.
[22] DCNR-HP&A, Rowley, p9; Townley, *Alfalfa Country*, 63-64, 127-128.
[23] DCNR-HP&A, Rowley, p9; William D. Rowley, *U.S. Forest Service Grazing and Rangelands: A History*, (College Station: Texas A&M, 1985), 5.

Unlike most of the American West in the 1890s, Nevada did not experience population growth and economic development, but rather limited stagnation and population decline as it transitioned from a mining-based economy to an agricultural economy. With most of Nevada's farms and ranches being run by single families, occasionally with small numbers of hired laborers, the need for workers and availability of land was simply not equal to neighboring western states. Over the course of the late nineteenth century, Nevada's number of farms doubled, total farm acreage increased ten-fold, and the average size of farms increased from 200 acres to nearly 1,200. The result was that over the course of the mid to late-1890s, coupled with drought in California that hampered agriculture there, Nevada's farmers and ranchers made serious gains as prices rose for their products, accelerated by a blackleg epidemic in California in 1898. Blackleg is a bacterial infection that causes gas filled blisters to form on muscle tissue with black mottling under the skin and swelling limbs, usually causing death within a short time after an infected cow expresses symptoms. The epidemic led to a dispute among Nevada ranchers, many of whom were actually California-based with extensive range holdings within Nevada. During the crisis, Nevada-based ranchers were able to supply much of the demand for beef to the east that California could not supply due to a quarantine on their beef for the remainder of the year.[24]

For most of Nevada, the developments in the late-nineteenth century leading into the Progressive Era radically shifted the framework for farming and ranching in the state, typified by an increasing focus on good range management and an increasing expectation of federal involvement. Reclamation in particular dominated agricultural conversations throughout the 1880s and 1890s. Discussions rarely moved beyond lip-service at both the Nevada legislature and in Washington, but increasing public pressure eventually forced an outcome. Eleven years after the establishment of the U.S. Forest Reserves, Congress followed up with the passage of the Reclamation Act of 1902. Championed by Nevada U.S. Senator Francis G. Newlands, the bill authorized federal funding to establish large-scale irrigation districts throughout the American West to expand the reach of western agricultural production, but leaving those irrigation systems under the regulation of state water engineers or other officials. In Nevada, the Carson-Truckee Irrigation Project, later renamed after Senator Newlands, diverted water from the Carson and Truckee Rivers to farms in Washoe, Churchill, and Lyon counties. Although the Newlands Irrigation Project precipitated extended litigation along the Carson River that was not resolved until 1980, it did pave the way for the expansion of agriculture in northwest Nevada, specifically the expansion of alfalfa production. Still reliant on California markets, Churchill, Lyon, Douglas, and Ormsby County farmers produced large quantities of alfalfa until being hit hard by the post World War agricultural depression in the 1920s, and a devastating quarantine by the State of California in response to an alfalfa weevil outbreak during the same time period.[25]

The stock market crash of 1929 proved disastrous for Nevada's livestock industry. Although not as drastic a loss as other industries in the nation, the decline of agricultural income that had begun in the 1920s only worsened after the crash, as the lending institutions that had been keeping farms and ranches in the state afloat folded due to losses in investment income. In Nevada, the bank network operated by famed Nevada financier George Wingfield folded, removing a valuable source of stability and credit to agriculturalists. Farm and ranch income statewide fell further from $22.1 million in 1928 to $6.4 million in 1932. In an effort to assist the livestock industry that dominated so much of the state's economy, Governor Balzar appointed a State Agricultural Relief Committee. During its life, the Committee secured freight rate reductions on feed sent into Nevada and on livestock that had to be moved inside state boundaries to feeding areas. The Committee also received over 12 million pounds of wheat to be passed from the Federal Farm Board to stockmen. Although

[24] Townley, *Alfalfa Country*, 165-170.
[25] Townley, *Alfalfa Country*, 14-15, 111, 173-175; Grace Dangberg, *Conflict on the Carson*, (Minden, Nev.: Douglas County Historical Society, 1975), 150; Samuel P. Hays, *Conservation and Gospel of Efficiency: The Progressive Conservation Movement, 1890-1920*, (Pittsburgh: University of Pittsburgh Press, 1999), 18-19.

helpful, these actions were not adequate, compelling Balzar to establish a State Emergency Relief and Construction Committee attached to the Agricultural Relief Committee, with the hopes that Nevada would receive federal relief funds from the Reconstruction Finance Corporation. This signaled a shift from state to federal responsibility in responding to the economic crisis and one that became a defining characteristic of the New Deal era. In Nevada, stockmen who had gone bankrupt frequently had to give up their ranches to Pacific and East Coast bankers, changing the tenor of the state's livestock industry. In the early 1930s, state agencies such as the Nevada Livestock Production Credit Association and the State Emergency Relief Committee became clearing houses for federal programs and funding, providing aid in various forms and support for ranchers and farmers to refinance their properties. A severe drought in 1934 hampered these efforts, and subsequent support from the federal Agricultural Adjustment Administration, the Rural Rehabilitation Administration, and the Soil Conservation Service struggled to rebuild Nevada's former agricultural success. The Civilian Conservation Corps established camps throughout the state to assist with agricultural projects, from fence-building to irrigation projects. The federal Land Utilization Program established in 1934 under several New Deal programs also allowed federal agencies including the Grazing Service and General Land Office to purchase marginal agricultural land from stressed farmers, returning it to range, or using it for other purposes such as wildlife habitat or outdoor recreation. Recovery was slow but steady, rising from a state-wide farm income of $8 million in 1932 to $12.4 million in 1935, and then to $16 million in 1940 aided by the need for supplies in Europe at the start of the Second World War.[26]

Amid the Great Depression and New Deal era, several federal programs implemented in Nevada sought to assist the floundering agricultural industry. The passage of the Taylor Grazing Act of 1934 spelled a significant shift in the livestock industry in western states and the introduction of federal range management throughout most of Nevada. The act sought to reduce overgrazing by limiting grazing on public lands through permits, reducing the amount of livestock that could graze on public lands, and buying back homesteaded property that was simply too unproductive to support a ranching operation. The implementation of this federal law was controversial and altered the landscape of ranching statewide, forcing ranchers to rely on federal grazing permits from the Grazing Service or Forest Service to sustain their cattle, especially in the northern and eastern sections of the state. With part of the permit requirements including preferences for nearby ranchers, sheep graziers who often did not own ranches were forced to either acquire ranches or to leave the industry. Other organizations such as the Works Progress Administration (WPA) and the Civilian Conservation Corps (CCC) improved irrigation networks, constructed new fences, built watering ponds or reservoirs, and built other features to improve private ranching operations.[27]

The postwar age saw further transformation of the agricultural industry in the American West, especially as public land came under new pressures and demands. Where federal land had previously been used primarily for mining and ranching, it was now used for a number of different tasks, both public and private. American families traveled to national parks and forests in record numbers, viewing rural areas as valuable scenery as much as a reservoir of raw materials. Advances in ecological science forced land use managers to confront environmental realities and implement national laws seeking to preserve clean air, water, and wildlife. Congress' passage of the Multiple Use-Sustained Yield Act of 1960 shifted much of the U.S. Forest Service's territory in the American West from use as summer sheep and cattle grazing lands to multiple-use management rather than simply timber cutting and grazing. In 1961, regional forester Floyd Iverson, who oversaw much of

[26] Elliott, *History of Nevada*, 289; Renée Corona Kolvet and Victoria Ford, *Civilian Conservation Corps in Nevada: From Boys to Men*, (Reno & Las Vegas: University of Nevada Press, 2006), 30-38; U.S. Department of Agriculture, Economic Research Service, *The Land Utilization Program, 1934 to 1964: Origin, Development, and Present Status*, (1965), 4, https://naldc.nal.usda.gov/naldc/download.xhtml?id=CAT87201807&content=PDF, accessed December 5, 2017.
[27] Elliott, *History of Nevada*, 289-291; Tueller, 124.

Nevada's National Forest territory, informed the state's U.S. Senator Alan Bible that the likelihood of curtailed grazing in the Humboldt Forest for Nevada ranchers was high, in order to provide for range and watershed restoration. The Bureau of Land Management's 1974 environmental impact statement on nationwide grazing severely curtailed grazing efforts on BLM land as well, leading to political fallout for the agency as it was forced to balance management between graziers, miners, recreational users, and ecological needs. This culminated in the passage of the Federal Land Policy and Management Act (FLPMA) of 1976, which Congress hoped would provide a framework for balancing these competing interests. The act transformed the BLM's operating framework from one that had been pushing public land into private hands, to one that sought to maintain and manage land in federal ownership. The increased pressures and limitations on grazing that resulted from this act precipitated a movement in Nevada beginning in 1979 that claimed the public domain in Nevada was the property of the State of Nevada rather than the federal government. Commonly termed the Sagebrush Rebellion, the movement lasted into the 1980s, but ultimately failed as a coalition of state's rights activists disintegrated amid concerns that transfer to the state would result in massive sell-offs into private hands. The limitations that remained on ranchers, combined with sharp increases in beef production in the American Midwest and the subsequent fall in beef prices, forced many ranchers with small operations to either consolidate or close down entirely, usually selling their land to housing developers or to larger ranch operations. [28]

Alongside economic and land management transitions, the years following the Second World War involved a steady but major shift in the way western ranching occurred in places like Nevada. Declining revenue forced small farm and ranch owners to sell to larger interests who could absorb the annual ups and downs in the market and the lower consumer prices for their products, resulting in more land consolidated under fewer ranchers. Between 1950 and 1970, the number of Americans employed in farming fell from 7 million to 3 million. Between 1945 and the 1980s, the total number of U.S. farms dropped from 6 million to 2.2 million, and the average farm size increased from 200 to 455 acres. In Nevada, as these trends toward larger operations took hold, farm and ranch income increased dramatically from $38.9 million in 1955 to $233.1 million in 1980. The increases mainly supported the cattle industry, as sheep declined from over one million animals in the 1930s to just over 100,000 by 1980 while cattle increased from 320,000 head in 1930 to 660,000 at the end of 1983. Alongside the decline in the profitability of ranching, ranchers found increasing incentives to sell their land for development, as Nevada's landscapes, especially near the Sierra Nevada Mountains, or around Las Vegas, became attractive landscapes for new arrivals to the west. For many ranch owners, selling to a developer spelled more profit and an easier life than attempting to maintain a livestock operation in the Great Basin's harsh environment. Furthermore, as ranching and farming became more energy-intensive and dependent on new technology, it also required greater investments in capital, which privileged large-scale farming and ranching over smaller family operations. The result in arid western states like Nevada was an increased reliance upon, and expansion of, irrigation systems, with the Bureau of Reclamation and other interests expanding the irrigated acreage of the region from 19.4 million acres in 1945 to 36.6 million acres in 1974.[29]

The end of the post-World War II agricultural boom largely came in the late-1970s and early 1980s as a result of global market shifts. The expanded markets that had facilitated the growth of American beef and grain production bottomed out, especially due to fallout with the Soviet Union in 1980, which was a major importer of American grain. Rapidly rising inflation throughout the late 1970s forced many small farmers out of the

[28] Rowley, *U.S. Forest Service*, 231-233, 237; Elliott, *History of Nevada*, 342; Christopher A. Simon, "A Crucible for Populist Resistance: Tracing the Roots of the Sagebrush Rebellion," in *Cities, Sagebrush, and Solitude: Urbanization and Cultural Conflict in the Great Basin*, Dennis R. Judd and Stephanie L. Witt, eds., (Reno & Las Vegas: University of Nevada Press, 2015, 94.
[29] Mark B. Lapping, Thomas L. Daniels, and John W. Keller, *Rural Planning and Development in the United States*, (New York: Guilford Press, 1989); Russell R. Elliottt, *History of Nevada*, 2nd ed., (Lincoln: University of Nebraska Press, 1987), 289, 341; Richard White, *"It's Your Misfortune and None of My Own": A New History of the American West*, (Norman: University of Oklahoma Press, 1991), 514, 521.

industry under greater amounts of debt. Rising energy prices due to increased importation of oil also meant that it cost farmers more to operate, inclining successful operations to become larger to keep up with the economies of scale inherent in an increasingly globalized agricultural market. In some cases, the threats to ranching came from the long-held practices of ranching in combination with climate change and shifting land use patterns. A combination of over-grazing, a warming climate, disruption of historic fire regimes, and recovery from settlement-era harvesting expanded native pinon-juniper woodlands into new areas, reducing groundwater in those areas. Continuous over-grazing by livestock and by naturalized wild horses and burros, both of which competed with native foragers such as deer and elk, further disrupted Nevada's grazing landscape. Finally, population increase and climate change began affecting hydrological cycles, leading to less snowfall and quicker snowmelts, and stressing flood control and irrigation systems. Aggravating these climate cycles has been an increasing demand for drinking water from urban environments, placing further stress on farmers who find the cost of water increasing alongside those for energy and other production needs.[30]

These issues have led to disputes that are still active today, most notably in a focus on recovery of Sage Grouse habitat and water disputes between various government entities at the local, state, and federal levels. Specific to the Carson River, increasing demands from urbanizing areas within Douglas, Carson, Storey, Lyon, and Churchill counties has diverted more water away from farmers for municipal use. Agricultural demands from California into Douglas, Lyon, and Churchill counties in Nevada has also required careful cooperation between water interests from both states to ensure fair distribution. Such factors place the region's agricultural future in question. Pushed by these factors and others described above, Nevada's smaller farmers and ranchers have continued to leave the industry, either selling to larger ranching interests or, if in the vicinity of growing towns and cities, selling their land for suburban development. However, demands on the part of those same urban and suburban residents for local produce has revived a trend in northwestern Nevada toward smaller farm operations, so far focused on Mason and Lahontan Valleys, and urban farming in the former Truckee Meadows area around Reno, leaving the future of Nevada's farming and ranching industry uncertain.[31]

[30] White, *A New History of the American West*, 559; Jessica L. Deshazo and Zachary A. Smith, "The Fragile Desert: Managing the Great Basin's Environmental Crisis," in *Cities, Sagebrush, and Solitude*, 114-118, 120-122; Beesley, 187.
[31] White, *A New History of the American West*, 559; Deshazo and Smith, "The Fragile Desert," 114-118, 120-122; Beesley, 187.

Agriculture on the Carson River in Douglas and Ormsby Counties

Although this context begins in 1848 with the earliest agricultural settlements in what became Carson and Douglas Counties, it is important to note that such agricultural practices were predicated on the conquest of the territory and seizure of land from the region's native inhabitants, the Washoe. The territory of the Washoe people has always focused on Lake Tahoe, with the present-day Pine Nut and Virginia mountain ranges being the eastern extent of the tribe's ancestral lands. The Carson River, or *Watah she mu*, and its wetlands became an important part of the traditional cultural practices of the Washoe, which, according to tribal elders, have been in place since creation. Of the three groups of Washoe, the *Wel mel ti*, the *Hung a lel ti*, and the *Pau wa lu*, the latter were considered the inhabitants of Carson Valley. Language variations and geography distinguished the three groups, although they came together throughout the year for special gatherings and events. The year usually began in spring with a large gathering on the shores of Lake Tahoe, or *Da ow a ga*. During the summer, family groups tended to split off and hunt, fish, and gather throughout the Sierra Nevada mountains. In the fall, the *Pau wa lu* would move to the Pine Nut Mountains and take part in the *tah gum*, the pine nut harvest that was the culmination of the fall gathering season, and included hunting and the preparation of meat stores for the winter. The Washoe people practiced horticulture to encourage the growth of particular kinds of plants, and the periodic use of fire to manage forest and grassland landscapes. Although the Washoe traded among the Paiute, Shoshone, Miwok, and Maidu, sometimes traveling as far as the Pacific coast within their trade network, the region around Lake Tahoe remained the base of their ancestral homeland until the arrival of Euro-Americans in large numbers beginning in the 1840s.[32]

Guide to the Maps

Attached to this MPDF is a map series to provide a visual reference for the communities, farms, and ranches referenced in the text. The areas covered by each map do overlap with one another, but show concentrations based on historic community names and ranching areas. Historic farms and ranches included on the maps are illustrated by blue borders, which indicate current parcel lines associated with the complex. It is important to note that a nomination for eligible ranches shown on these maps will need to research the full extent of historic ranching associated with that property, and may find that the appropriate boundary for a National Register nomination extends beyond the illustrations on the maps included in this MPDF.

Map Number & Title	Communities/Areas Illustrated
Map 1 – Carson City & Douglas County	Full study area
Map 2 – Carson City & New Empire	Eagle Valley (Carson City & New Empire)
Map 3 – Centerville Area Ranches	Centerville and West Fork of the Carson River
Map 4 – Sheridan Area Ranches	Fairview, Luther & Sheridan
Map 5 – Minden & Gardnerville Area Ranches	Minden, Gardnerville, and areas immediately north and south of both towns
Map 6 – Genoa Area Ranches	Genoa, and ranches along Genoa Lane and Jacks Valley Road north of Genoa.
Map 7 – Jack's Valley Area Ranches	Jack's Valley along Jack's Valley Road.
Map 8 – Johnson Lane & Buckeye Area Ranches	Ranches in lower Carson Valley, mostly along U.S. 395 north of Minden
Map 9 – Long Valley & Dresslerville Area Ranches	Long Valley & Dresslerville, east of NV-89 and south of Gardnerville

[32] Washoe Tribe of California and Nevada, *Wa She Shu: "The Washoe People" Past and Present*, Gardnerville, https://www.washoetribe.us/contents/images/brochures/Wa%20She%20Shu%20Booklet.pdf, accessed March 6, 2017.

Map 10 – Mottsville Area Ranches	Mottsville, Van Sickle Station, and ranches east of Mottsville on Mottsville Lane.
Map 11 – Waterloo Area Ranches	Waterloo
Map 12 – Carson Valley Creameries	Minden, Gardnerville, Waterloo

1848 to 1880 – Mile Houses, Mormons, and Miners

Agriculture on the upper Carson River beyond the horticulture practiced by the Washoe began alongside the development of overland transportation networks between the eastern United States and west coast of North America in the 1840s. The routes brought travelers westward to California through native territory formerly claimed by Spain (later Mexico). The trails also facilitated the early expansion of the Church of Jesus Christ of Latter-day Saints (LDS), or Mormons, from their base on the shores of Salt Lake to the western extent of Utah Territory from the Carson Valley north to Truckee Meadows. The earliest iteration of the California Trail included several routes through what would become northwest Nevada as travelers pushed through the passes of the Sierra Nevada Mountains. These routes provided the first impetus for agricultural development along the eastern front of the Sierras. Among those routes established was that surveyed by Mormon explorer Henry Bigler along the west fork of the Carson River and over Carson Pass in California, west of present-day Markleeville. Bigler's route brought travelers, mostly gold prospectors, south of Lake Tahoe through Eagle and Carson Valleys and southwest toward present-day Sutter Hill, California. Even those Mormons who made the first forays into Carson Valley initially intended to trade rather than to settle, establishing a trading post in the present-day town of Genoa in 1850 under Joseph Demont to both sell to travelers and trade with the Washoe and Paiute. With the outpost reporting rich grasslands in Carson Valley, the Mormon Church endeavored to place a permanent settlement at the station, thus introducing the first agriculture by Euro-Americans in the area. Having developed effective irrigation networks in Salt Lake Valley and nearby in the late 1840s, the Mormon settlers brought the necessary techniques to harness the rich soils of Carson Valley for agricultural purposes.[33] Settlement under Mormon leadership was relatively slow along the eastern Sierra. In 1850, Mormon settlers H.S. Beatie and Abner Blackburn established a small trading post called Mormon Station near the mouth of Adams Canyon. The following year, a small group of Mormon colonists led by John Reese established another Mormon Station at the foot of the Sierras in Carson Valley in 1851, which would later be renamed Genoa in 1855. The 1851 Mormon Station consisted of a log cabin, a turnip garden, and a stockade corral of about an acre, built of fifteen-foot logs rammed three feet into the soil to retain livestock and protect against attacks. Trading attracted the presence of cattle drovers, with both Reese's party and Capt. H.A. Parker of Ben Holladay's wagon company driving cattle into Carson Valley in 1851. Four miles to the south, Israel Mott and his wife, California-bound on a wagon train, decided to remain in Carson Valley and established a small home near present-day Mottsville. In these early years, the valley was largely self-governing, with meetings throughout 1851 establishing a land sale system and authorizing anyone with the ability to run a sawmill to do so and take a stand of timber for the purpose (see Map 6).[34]

[33] Richard Moreno, *A Short History of Carson City*, (Reno & Las Vegas: University of Nevada Press, 2011), 11; Marshall Fey, R. Joe King, and Jack Lepisto, *Emigrant Shadows: A History and Guide to the California Trail*, (Virginia City, Nev.: Western Trails Research Association, 2002), 123-153; Grace Dangberg, *Carson Valley: Historical Sketches of Nevada's First Settlement*, (Minden: Carson Valley Historical Society, 1979), 2; Nevada Department of Conservation and Natural Resources (DCNR), Historic Preservation & Archaeology Division (HP&A), *Nevada Ranching and Farming 1841-1942: A Study Unit for the Nevada State Historic Preservation Plan*, by Evelyne Pickett, (Carson City, Nevada: 1986), 1; James W. Hulse, *The Silver State: Nevada's Heritage Reinterpreted*, (Reno & Las Vegas: University of Nevada Press, 1991), 58.

[34] DCNR-HP&A, *Ranching and Farming in Nevada*, by William D. Rowley, (Carson City, Nevada: no date), pp3-4; Dangberg, *Conflict on the Carson*, 2; *History of Nevada with Illustrations and Biographical Sketches of its Prominent Men and Pioneers*, (Oakland, Cali.: Thompson & West, 1881), 31-32; Helen S. Carlson, *Nevada Place Names: A Geographical Dictionary*, (Reno & Las Vegas: University of Nevada Press, 1974), p71; Moreno, 11-12, 81-83; Townley, *Alfalfa Country*, 21; Hubert Howe Bancroft, *History*

The first Mormon colonists settled in what was then western Millard County, Utah, and grew barley, wheat, turnips, and watermelons among other crops, inspiring others, Mormons and non-Mormon alike, to settle in Carson, Jacks, Eagle, Washoe, and Pleasant Valleys and the Truckee Meadows. By 1853, Reese's Mormon Station had more than ten acres of turnips and seven of small grains under plow. An ad-hoc local government began formalizing land claims, with John Reese' being the first, a quarter section extending from "Mormon Station south to a lone tree, including all between the mountain base and Carson River." Six other individuals claimed land north and south of the station that year. In 1852, Israel Mott arrived and founded what became the community of Mottsville, partnering with Reese to establish a toll bridge over the Carson River and a toll road up to the Tahoe basin (see Map 10). Also that year, Henry Van Sickle arrived and later claimed land south of Genoa in 1855, hiring Charles Holbrook to build a stone house there in 1857. As an indicator of challenges to come, in December of 1852, a heavy snow on Christmas Eve melted soon thereafter, causing serious flooding along the Carson and its tributaries. By 1860, Van Sickle had five barns at the station, usually filled with horses and mules of travelers on their way to or from California.[35]

In March 1853, the settlers of the valley met to confirm land sale procedures. They established that land must be claimed with the county Recorder and that improvements worth $100 must be made within 60 days. Men with families could claim up to 640 acres, and single men could claim 320. Ben Palmer, a black freedman from Missouri, arrived in 1853 and established a 320-acre ranch in what became known as the town of Sheridan, a small black community anchored by three early black and interracial families, the Palmers, Barbers, and Millers (see Map 4). It is believed Palmer and his sister, Clarissa Church, purchased their way out of slavery. Church married a white man named David (or D.H.) Barber, and the couple chose to settle just north of Palmer on a 400-acre ranch, raising their seven children. The small community of Sheridan that grew up around these three ranches became both a ranching hub and a way-station for travelers, with Clarissa Barber becoming well-known in the valley as a matron and hostess. These ranching families employed a combination of black, Indian, and white ranch hands and drove the early development of this section of Carson Valley. Farther east, Desert Station sprang up on the road between Carson City and Esmeralda County as a supply station, near the present-day community of Johnson Lane. By 1888, Desert Station was described as "a hotel and stopping-place for freight teams and travelers. The land has been reclaimed from sage-brush. There is a good house here, a blacksmith shop, barns, and two wells where water is raised by windmills for irrigation, etc." In 1905, the Dangberg Company moved the main Desert Station house to their Buckeye Farm/Ranch Complex north of Minden. Cultivation in the early 1850s included enough grain to justify a threshing machine by 1854, as well as regionally-known butter from dairy producers in the valley [36]

North of Carson Valley, a small group of mining prospectors from California constructed the first settlement in what they named Eagle Valley. Their settlement was a small ranch known as Eagle Station, placed along the overland route near present-day Fifth and Thompson Streets in Carson City. Among the earliest of these Eagle Valley ranchers was Benjamin L. King, who established a small ranch on the western side of the valley at the mouth of what is now King's Canyon. Samuel Nevers and his wife Eliza purchased a ranch near Ash Canyon in the 1850s, bringing with them their nephew, Ira Lee Winters. Winters later acquired the Nevers property and

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of Nevada, 1540-1888, 1890 (reprint, Las Vegas: Nevada Publications, 1981), 79; Dangberg, *Carson Valley*, 3, 8, 40; *The Historical Nevada Magazine: Outstanding Historical Features from the Pages of Nevada Magazine*, (Carson City: Nevada Magazine, 1998), 82-83; Elliott, *History of Nevada*, 51, 116;

[35] DCNR-HP&A, Rowley,pp3-4; *History of Nevada*, 33-35; Dangberg, *Conflict on the Carson*, 2

[36] DCNR-HP&A, Rowley,pp3-4; *History of Nevada*, 33-34, 372; Dangberg, *Conflict on the Carson*, 2; Carlson, p71; Moreno, 11-12, 81-83; Townley, *Alfalfa Country*, 21; Bancroft, 79; Dangberg, *Carson Valley*, 3, 8, 40; *The Historical Nevada Magazine*, 82-83; Elliott, *History of Nevada*, 51, 116; Ed Johnson, "The First Black Rancher," *Nevada Magazine*, (January/February 1989), 27; *History of Nevada*, 373.

expanded it into a sizeable ranch that covered most of what is now west Carson City. For the next four years, the population and acreage under till in both Eagle and Carson Valleys steadily increased under primarily Mormon governance, developing a small but thriving agricultural market by 1855. They supplied both overland travelers to California, and a growing number of prospectors twenty miles east of them near the present-day town of Dayton. They were joined by stations and trading posts throughout the region, including Job's Station at the present community of Sheridan. The prospectors that had established Eagle Station, among other ventures, became packers of good for hauling, and graded a road up Kings Canyon in the hopes that travel over the Sierras could be diverted that direction. However, despite new and growing settlements in Eagle and Washoe Valley, Carson Valley remained the seat of production for much of this early period.[37]

In 1854, the Utah Territorial Legislature established Carson County to govern this section of Utah Territory, which included most of northwest Nevada, and dispatched Orson Hyde to administer the local government. Agitation among non-Mormon locals to separate from Utah Territory compelled the church to send Hyde to impose some degree of order and provide basic government services, a key complaint from Carson Valley residents. Hyde named Genoa as the seat of government for the new county, and established a sawmill at Franktown in southern Washoe Valley. Amid this formalization of LDS administration, over sixty Mormon families moved to Genoa between 1855 and 1856 to develop the community into a permanent town. However, in 1857, in the midst of what almost became armed conflict between the LDS Church and the United States, Mormon leader Brigham Young recalled Mormon settlers from outlying areas to Salt Lake to form a defense. Mormon farm and ranch families that left simply abandoned their farms, ranches, and sawmills. Some returned after the church and federal government resolved the conflict, but found many of the former Mormon ranches now claimed by non-Mormon settlers. Among those Mormons who arrived in an attempt to resettle the area under LDS administration were the Fulstones, a family of English immigrants who had arrived in the Americas in 1855 after converting to the church, and moving to Eagle Valley in 1858. Henry Fulstone, Sr. established a shoe shop on King Street. His two sons, Henry, Jr. and Robert, acquired property northwest of Carson City near the Carson Hot Springs, both constructing houses for their families by 1862. By 1870, Robert Fulstone had amassed a sizeable farming operation of 520 acres, including 26 cows (generally referring to dairy cattle), 20 stock cattle (generally referring to beef cattle), and growing and storing around 18 tons of hay annually.[38]

Amid the Mormon settlement along the upper Carson, several supply stations emerged to serve overland trail travelers headed for California. Among these was Dutch Nicks, established by Nicholas Ambrose in 1855 in eastern Eagle Valley on the site of what would become Empire City. Farther south, the crossing over Clear Creek boasted a blacksmith and telegraph office during its operation in the late 1850s and early 1860s. Proceeding south and west into Jack's Valley, the Jack Winters Ranch offered some respite to travelers if needed, operating most of the valley as pasture and hayfields that could be sold to traveling horse and oxen teams (see Map 7). From Jack's Valley, emigrants proceeded south into Genoa, or Mormon Station, and proceeded along the foothills of the Sierras past other way stations, including Walley's Hot Springs, Van Sickle Station, Mottsville, Sheridan, and Dressler Ranch before proceeding into California via Fredericksburg. Ira M. Luther, a rancher in the upper (southern) part of Carson Valley, helped establish the community of Fairview in 1858, which included a sawmill, his ranch, a school, and a hostelry called the old Cotton Hotel at the mouth of Luther (or Fay) Canyon. By 1862, Luther was joined by three other ranch steads, including Lute Olds' to the south, and W. Wyatt's to the north (see Map 4). The proliferation of roads through the Sierras for overland

[37] DCNR-HP&A, Rowley, 3-4; Dangberg, *Conflict on the Carson*, 2; Carlson, *Nevada Place Names*, 71; Moreno, 11-12, 81-83; Townley, *Alfalfa Country*, 21; Bancroft, 79; Dangberg, *Carson Valley*, 3, 8, 40.
[38] DCNR-HP&A, Pickett, 1-2; DCNR-HP&A, Rowley, pp3-4; Hulse, *The Silver State*, 58-60; Moreno, 14; Townley, *Alfalfa Country*, 21; Nevada Department of Transportation, Environmental Services Division, *The Farmer and the Gatekeeper: Historical Archaeology and Agriculture in Early Carson City*, by Peter B. Mires and Margaret E. Bullock, (Carson City, Nev., 1995), 4-5.

travelers became both a blessing and a bane to the Carson Valley's commercial center of Genoa. In 1861, area developers constructed a north-south road through Carson Valley from Carson City, constructing the Cradlebaugh Toll Bridge over the Carson River at the valley's north end, shortening the distance between Carson City and the Twelve Mile House, a station on the road to Aurora. The King's Canyon Toll Road opened in 1863, bypassing Genoa by nearly ten miles to the north, allowing Carson City to rise as a small trading community. However, Carson Valley's size relative to Eagle Valley ensured that it remained one of the key agricultural production centers for the region's growing mining and milling communities such as Virginia City, Dayton, and Aurora.[39]

Although many of the station operators either were Mormon, or settled alongside Mormons prior to their departure in 1857, the neighboring Mormon-owned ranches throughout the valley largely shifted to non-Mormon ownership by 1860 in the absence of any church authority to enforce land laws. With the market still demanding produce for travelers and for new mining towns, these new ranchers filled the gap, providing supplies to travelers on the Johnson's Cutoff of the California Trail, maintaining Genoa as the hub for re-supply along the upper Carson River. Dan De Quille's 1876 chronicle, *Big Bonanza*, included a quote from an editorial in the Virginia City *Mountain Democrat* which described Carson Valley thusly:

> There are but few houses in the Valley (Carson), and at each house a few acres have been fenced in with sawed lumber, and those seem to have been designed for grazing purposes. I have not seen an agricultural implement since I have been in the Territory, and only about one acre of land plowed, or bearing any appearance of having been placed in a preliminary state of preparation for cultivation. I am told, however, that there are several good farms in the smaller valleys, back in the cañons among the foothills, but the greatest portion of the valley I have seen is entirely destitute of soil, being a loose, dry, coarse sand, which with all the irrigation and cultivation that could be bestowed upon it, could not possibly be made to "sprout a pea." Taken altogether, the whole country presents and uninviting appearance, and I am satisfied that so far as agriculture is concerned, Carson Valley is an unmitigated humbug. I hope, however, that a more thorough investigation will prove that the small valleys before alluded to, will, when put under cultivation, produce sufficient to meet the wants of the people of western Utah.[40]

Despite these observations, ranching had taken firm root in the valley by 1860, aided by an increasing network of irrigation ditches. That year, Carson Valley, combined with Jack's and Long Valleys and Genoa, included 773 people in 175 dwellings. Eagle Ranch expanded as well, as John Mankins took over many of the former Mormon properties in Eagle Valley. Mankins sold much of this land on August 12, 1858 to real estate speculators including Abraham Curry, F.M. Proctor, B.F. Green, and J.J. Musser, who according to popular legend, found Genoa's property prices too high and sought to purchase land to the north in Eagle Valley. The 865 acres they purchased from Mankins was likely overgrazed by that year, due to California Trail traffic. in 1858, the four men soon sold to William Ormsby, who laid out regular, rectangular plat lines within the valley and named the community Carson City. Ormsby not only established a hotel named the St. Charles in downtown Carson City, but became one of the first and most outspoken advocates of a territorial government separate from that in Salt Lake City. The following year, U.S. Army Capt. James H. Simpson described the small community as having around a dozen frame houses and two stores. Designation as the territorial capital in 1862 spurred more growth and investment in the town, which soon became a hub of mercantilism for northwest

[39] Richard Moreno, *A Short History of Carson City*, (Reno & Las Vegas: University of Nevada Press, 2011), 11; Marshall Fey, R. Joe King, and Jack Lepisto, *Emigrant Shadows: A History and Guide to the California Trail*, (Virginia City, Nev.: Western Trails Research Association, 2002), 123-153; Dangberg, *Carson Valley*, 11-12, 51-53; U.S. Surveyor General, Survey Map, Township 12 North, Range 19 East, Mount Diablo Meridian, 1862, General Land Office Records, Bureau of Land Management, http://www.glorecords.blm.gov/details/survey/default.aspx?dm_id=353268&sid=laih52ei.k0c#resultsTabIndex=1, accessed November 9, 2016.
[40] *Mountain Democrat*, April 5, 1860, in *History of Nevada*, 66-67.

Nevada, as well as a key stop on the Virginia & Truckee Railroad between the Central Pacific line in Truckee Meadows and the silver mines of Virginia City.[41]

Among the best descriptors of Carson Valley as it appeared after the departure of the LDS Church are the so-called "Tennessee Letters," letters written by Richard N. Allen, a correspondent of the *San Francisco Herald* between 1857 and 1860 under the pen name "Tennessee." Traveling over the Sierras via the southern route along the upper Carson River, Allen described his first experience of Carson Valley:

> At first sight this Valley does not appear more than ten or fifteen miles long, and five or six wide; the actual length, however, is thirty miles, and the width eleven. The river runs near the middle of the Valley, the whole length of it, and, with the exception of the willows along its banks, there is no timber whatever in the Valley. The surrounding mountains, however, are covered with pines, and a few cottonwoods and cedars. The soil of the Valley is well adapted to the growth of grains and garden vegetables, and probably no place in California can equal it for grazing; even at this season there is an abundance of grass for fifty thousand of cattle to fatten upon. I have seen no beef in the San Francisco market equal to that furnished by the butchers here.
>
> Of the productions of the soil, I have seen wheat, barley, oats, potatos [sic], and almost all kinds of garden vegetables–all of excellent quality, and produced in the greatest abundance.
>
> The most remarkable feature of the Valley is the great number of beautiful rivulets, many of them large enough to turn a mill, running down from the mountains every few hundred yards. Two grist mills and two saw mills are in constant operation, furnishing flour at ten dollars a hundred, and lumber at twenty dollars a thousand feet.[42]

Allen also noted a unique variety of seven-headed wheat that grew abnormally well in the valley. Despite Allen's observations, and considering the biological and transportation limits of the environment about which he speaks, it is more likely that the ranchers of Carson Valley had already learned of the limited ability of the land to grow produce, not only due to scarce water and harsh climate, but also due to the distance from any suitable market without a fast railroad connection. Such hyperbole was common among observers of the nineteenth century witnessing these landscapes for the first time. Perhaps one of the most important absences in such records as Allen's is his lack of consideration for the Washoe and Paiute, native to the region. Since neither the Washoe nor Paiute settled permanently, opting for a series of seasonal campsites throughout the region, Mormon and other Euro-American settlers largely ignored their claims to territory. Allen did, however, document how Washoe and Paiute tribal members adapted to the new economy. Many opted into the farming and ranching economy as a new means of survival, either working on ranches, or, in a few rare cases, making their own land claims and ranching themselves. By the fall of 1857, Allen noted that while the Washoe were considered hostile, many of the local ranchers employed Paiutes as "rancheros" and spoke quite highly of them.[43]

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[41] DCNR-HP&A, Pickett, pp1-2; DCNR-HP&A, Rowley, pp3-4; Hulse, *The Silver State*, pp58-60, 68; Carlson, p71; Moreno, 13, 15-17.
[42] Richard Allen, October 9, 1857, in David Thompson, ed., *The Tennessee Letters: From Carson Valley, 1857-1860*, (Reno: The Grace Dangberg Foundation, Inc., 1983), 2-3.
[43] Allen, October 9, 1857, Thompson, 3 and August 25, 1859, Thompson 79, and October 22, 1859, Thompson, 90, and December 27, 1859, Thompson 105-106.

Allen's visit coincided with the departure of the LDS Church from the eastern Sierras and a severe drought in California in 1858. The drought compelled many cattle ranchers to drive their cattle across the Sierra Nevada Mountains and winter them in the lush grasslands of the Truckee Meadows, and of Washoe, Eagle, and Carson Valleys. Most did not establish permanent settlements, instead practicing transhumance grazing, wintering their cattle in the valleys and summering them in upland mountain valleys. Among these cattlemen was Nathaniel "Hock" Mason who drove his cattle through the Pine Nut Mountains east of Carson Valley into the neighboring valley along the upper Walker River, establishing a permanent ranch in what would later be named Mason Valley. In 1859 William H. Boyd drove a herd of cattle into Carson Valley and reported to Richard Allen that he found the quality of grazing in Carson Valley to be superior to that in the Central Valley on the opposite side of the Sierras, compelling more ranchers to come to the valley. On the heels of this migration, Richard Allen noted that the valley was already overgrazed by October of 1859. Adding to the grazing woes was the loss of timber from over-logging (and a general scarcity in the valleys to begin with), leading many ranchers in the valley to construct relatively small homes. Allen also noted that cramped apartment living was not unusual in Genoa.[44]

Lamenting the impact of cattle and sheep grazing on the landscape, and the influence of the harsh winter of 1859-1860, Richard Allen observed as part journalist, part booster, and part social critic in January of 1860 that:

> Of the five hundred square miles of land in Carson Valley, probably one-third is susceptible of cultivation, and has water at hand for artificial irrigation. About one-half of this is already claimed, and about one-tenth occupied, a claimant generally not being satisfied with less than from one to two thousand acres. Wheat, corn, oats, barley, potatoes, etc., can be produced, with a little industry, in great abundance, but owing to a most reprehensible aversion to physical exertion on the part of the old inhabitants, nothing of any account has ever been raised, except cattle. It is to be hoped, however, that the present severe winter, by destroying more than half the stock, will have a tendency to drive the graziers to the more honorable, though more laborious occupation of tilling the soil, an occupation which, as it is more essential than any other to the necessities and comfort of man, has been considered, in every age and among all nations, the bulwark of patriotism and private virtue. On the other hand, I have observed that the business of cattle raising, as practiced by our frontiersmen, has the effect of brutalizing and degrading the human race almost to a level with their herds.[45]

Allen spent very little time describing Eagle Valley to the north, but made some limited observations in 1860, well after Eagle Station had grown into the small town of Carson City:

> Eagle Valley is situated fifteen miles north of Genoa, it is nearly circular in shape, and about twenty miles in circumference. It is watered by several small streams rushing down from the mountains, but the soil, I am told is not so productive as ours here in Carson. Carson City is in this valley, at the junction of the Honey Lake and Washoe trail and the great immigrant road [the California Trail]. This great city is remarkable as being the place of residence of the eminent statesmen of western Utah, men who are eternally getting up meetings and creating offices for their own use and benefit. Only last week they went to work to organize a municipal government for Carson City, a mere village that no honest geographer would notice upon a map of a hundred acres.[46]

Some ranchers attempted to save their cattle by driving them to other areas of the territory, including Henry Van Sickle who drove a herd to Owens Valley, although the Paiute confiscated many of the animals, claiming

[44] Allen, August 25, 1859, Thompson 79, and October 22, 1859, Thompson, 90, and December 27, 1859, Thompson 105-106; DCNR-HP&A, Pickett, p2.
[45] Allen, January 6, 1860, Thompson, 107.
[46] Allen, January 6, 1860, Thompson, 108.

trespass. Despite the harsh winter and the loss of livestock due to poor forage, farmers and ranchers in Eagle and Carson Valley recovered their finances fairly quickly due to the increasing price of goods after 1859. The silver strike on the Comstock Lode in that year transformed the ranching and agriculture industry of northwest Nevada, and set the stage for ongoing competition over water between the industries along the Carson River that persisted until the twentieth century. As thousands of hopeful prospectors rushed to new mining towns east of Eagle Valley like Virginia City, Silver City, and Gold Hill, nearby entrepreneurs such as the Dangbergs established or expanded ranching operations to provide food to the new residents. Initially, this expansion began without formal government oversight at the local or territorial levels. Most residents referred to the region innocuously as "Washoe," even after the strike and subsequent mining rush beginning in 1860, but the hub of mining activity was in the community of Virginia City. The growth in population and availability of precious metals compelled Congress to separate the region from Utah, declaring it Nevada Territory in 1861, and accepting it as the 36th state just three years later. The massive influx of people meant the demand for supplies rose significantly, providing an easy market for upper Carson River farmers and ranchers.[47]

With local demand drastically increasing by 1860, ranchers in Carson and Eagle Valleys saw demand and prices for their goods increase dramatically. Dairy products featured prominently, with Army surveyor Capt. J.H. Simpson observing that the rich gold-colored butter of Carson Valley fetched a higher price throughout the region, including in California. Henry Dangberg and other area ranchers held their hay later in the year for sale to new prospectors, capturing prices up to $400 a ton. However, a severe winter in 1859-1860 killed off a significant percentage of the beef and dairy cattle in the area. The subsequent rise in beef prices spurred immigration to the region, with some seeking silver wealth in the Comstock while others sought to establish new farms and ranches. The farming community of Sheridan was among those that sprang up during this growth. The first ranchers in Sheridan had been Ben Palmer, a highly successful African American rancher, and his white brother-in-law David Barber. By 1860, a small village had formed nearby around Moses Job's store next to the Barber's ranch stead, but Job sold quickly to J.W. Haines and I.W. Duncan in 1861. Also in 1860, Winfield and Sophia Miller, a black family, moved with their children to a ranch just south of Palmers. Although Winfield passed away soon after, Sophia remained to operate the ranch after his death. These new operations developed quickly along the Carson, Truckee, and Walker Rivers, and by 1861 farmers and ranchers as far away as fifty miles from Virginia City began raising beef and dairy cattle, sheep, horses, grains, and produce to ship to Virginia City and its surrounding mining and milling communities. G.W.G. Ferris constructed a Farm/Ranch Complex with the assistance of the Dangbergs in 1865, approximately one mile southeast of Genoa. Most farmers in the valley focused on dairying, grain, and hay production for the nearby mining communities, however, a few ranchers, including Henry Van Sickle, retained their cattle herds of several hundred to several thousand.[48]

Eagle Valley's expansion was concurrent with this trend, although to a lesser degree. Matthew C. Gardner arrived in the valley in the early 1860s, and by a decade later, had amassed a 300-acre ranch south of Carson City's center, one of Eagle Valley's largest, that included a large sawmill. It was located near Stewart Street and South Carson Street, approximately where the U.S. Forest Service office is at present. Farther to the south, Ormsby County officials established the Ormsby County Poor Farm along Clear Creek Road as an option for less fortunate travelers and residents who needed work and a place to live. There was a dormitory-like building

[47] Dangberg, *Carson Valley*, 122; Hulse, *The Silver State*, 71.
[48] Walton-Buchanan, 39; Dangberg, *Conflict on the Carson*, 138-139; Dangberg, *Carson Valley*, 63, 102, 110; Land patent to August Frederick Dressler, May 10, 1866, General Land Office Records, Bureau of Land Management, http://www.glorecords.blm.gov, accessed November 2, 2016; Survey plat map for Nevada TS 12 N, R 19E, 1862, General Land Office Records, Bureau of Land Management, accessed November 2, 2016; *The Historical Nevada Magazine*, 84.

and nearby farmlands. In 1965, the property was transferred to Carson City which razed most of the complex except the cemetery, and established Fuji Park.[49]

The need for labor and the economic opportunities afforded by the growing market attracted immigrants from across the globe to work in mines and their supporting industries. Carson Valley in particular developed an enclave of German, and some Danish, immigrants who farmed in the valleys and sold their produce in the neighboring mining towns. Among the most revered and successful of these was Heinrich Friedrich (Fred) Dangberg. Fred Dangberg was born in the Halle province of Westphalia, Germany, in 1830, and came to Carson Valley in 1853. He was one of the first of many Germans from that region that would immigrate to Carson Valley over the next several decades, including his brothers August and Christoph, who arrived in the valley in 1859 and 1864 respectively. Dangberg arrived expecting, as did many others, to search for gold and silver. However, also like many others, he found more profit in settling down and producing supplies for travelers, establishing a small station along the Carson Trail with his business partner, Ben Mast, and selling dairy supplies. Dangberg claimed his first parcel, consisting of 320 acres, in 1856 under the auspices of a local land committee. Dangberg selected a parcel near what is now the western edge of Minden, a site later known as the Klauber Ranch, on which he built a small cabin and began irrigating pasture land for cattle. However, in the spring of 1857, Dangberg lost his claim after a dispute with Genoa strongman William B. Thorington, an event that provides a vignette into the shaky land ownership that existed prior to the establishment of the state's land office in 1865. Later that year, Dangberg and Mast joined with Charles Holbrook, acquired a 640-acre tract on the middle branch of the Carson River, and built a two-room log cabin that is now a portion of the main residence at the Dangberg Home Ranch (NRIS# 80002466).[50]

As they successfully profited from selling supplies to travelers, Dangberg, Mast, and Holbrook steadily acquired additional lands. In an 1858 letter to his brother August, Fred Dangberg mentioned that he and his partner had:

> …bought 112 head of cattle, of which 65 are grown cows and all will have calves during the summer. 25 head are one-year-old cattle and the rest are oxen from one to three years old. Already this winter we have 10 young calves from the cows. If we have luck it could be that this year we will raise 75 to 90 calves. We have also about 100 head of cattle from another man which we will keep and watch for one year for which he will give us half of the calves which we raise on them.[51]

That year, they also increased their operating acreage to 918 acres, and Mast and Dangberg purchased Holbrook's interest in their cattle company. Mast and Dangberg then purchased an additional 250 acres from the Dettenriders and Thomas Anderson west of their claim, providing them access from both the east and west forks of the Carson River for irrigation and bottomland pasture. However, Mast returned to Pennsylvania that year, and Dangberg sought assistance from his family members who still resided in Germany. Concerned for his safety and seeing economic opportunity in expanded cattle ranching, Fred Dangberg hoped not only to secure their labor but to have them claim additional acreage under existing land laws to generate more pasture for his growing cattle herd. His brothers August and Christoph joined him by 1863, and helped recruit a small but steady supply of laborers from Germany, many of whom later became ranch owners themselves. Together, the

[49] DCNR-HP&A, Pickett, pp3-4; Moreno, 81-82; Walton-Buchanan, 107; Townley, *Alfalfa Country*, 22.
[50] Steve Achard and Conrad Buedel, *Lost Legacy of Carson Valley: The Rise and Fall of the H.F. Dangberg Ranching Empire*, (Minden, Nev.: Dangberg Partners, LLC, 2011), 12; Holly Walton-Buchanan, *Land of the Buckaroos: Historic Ranches of Western Nevada*, (Reno: Jack Bacon & Co., 2013), 34-35, 39; Achard and Buedel, 28-29.
[51] Letter from Fred Dangberg to August Dangberg, January 13, 1858, in Achard and Buedel, 33-34.

Dangbergs developed what would become one of the largest ranching operations in western Nevada by the early twentieth century.[52]

Aside from the Dangbergs themselves, the Dresslers became an equally powerful force in the ranching community, having established their own sizeable operation in the southern section of Carson Valley along what became known as Indian Creek. August Frederick Dressler arrived in the valley from Muhlhausen, Germany in 1860, and first worked on the farm of Bishop Jones before purchasing his own ranch which was (and remains) headquartered near the California-Nevada border in southern Douglas County. August and his wife Wilhelmena purchased several acres of bottomland near the site of present-day Gardnerville, Nevada. By 1866 they had also purchased 80 acres of public land on what became the best known of the Dressler ranches, now located on Dressler Lane in Douglas County west of State Highway 88. August and Wilhelmena were able to acquire several neighboring ranches including portions of the Marsh and Mack ranches south of Gardnerville, as well as a property in Sheridan where he operated a blacksmith shop. In 1879, Dressler constructed a small reservoir above and southeast of his main ranch site, named Mud Lake. By 1893, he had expanded the reservoir significantly to a capacity of 3252 acre-feet of water for Dressler's pasture and crops. By 1913, the Dressler family had built the ranch into a sizeable operation that included much of the southern end of Carson Valley on both sides of the Nevada-California border.[53]

Although the Dangbergs and Dresslers are arguably the best known of Carson Valley's ranchers, dozens of other successful ranchers established operations throughout the valley in the 1850s and 1860s. Several California ranchers chose to drive their cattle into Carson, Eagle, and Washoe Valleys and the Truckee Meadows beginning in 1858, some of whom opted to establish permanent ranching operations there. Also by that time, German immigrants, many of them learning of the success of early farmers like Dangberg and Dressler, or having worked for them for a time, settled in the valley and began ranches of their own. By 1858, Abraham Klauber immigrated to Carson Valley from Bohemia and purchased several tracts, including Fred Dangberg's 1856 claim that had been jumped by Thorington. Klauber also established stores to sell supplies in Carson City and Genoa. Other well-known ranchers arriving in the 1860s included G.W.G. Ferris, who would later invent the Ferris wheel, and who constructed a Farm/Ranch Complex with the assistance of the Dangbergs in 1865, approximately one mile southeast of Genoa. Most farmers in the valley focused on dairying, grain, and hay production for the nearby mining communities. However, a few ranchers, including Henry Van Sickle, retained their cattle herds of several hundred to several thousand. Frederick William Stodieck arrived in 1864 from Halle in Westphalia, Germany, bringing his wife Catherine Schulte, along in 1868. By the end of the 1870s, names such as Springmeyer, Lampe, and Hussman, had become established leaders in Carson Valley's agricultural network. Crop reports from the 1860s revealed that Douglas County was producing over 20,000 tons of hay, 20,000 bushels of wheat, 40,000 bushels of barley, 15,000 bushels of oats, 1,000 bushels of corn, and 5,000 bushels of potatoes a year.[54]

The presence of so many mining and farming communities and the exchange of goods among them necessitated the creation of enhanced infrastructure. A toll road stretched south from Carson City through Carson Valley to

[52] Walton-Buchanan, 34-35, 39; Achard and Buedel, 28-29, 36.
[53] Land patent to August Frederick Dressler, May 10, 1866, General Land Office Records, Bureau of Land Management, http://www.glorecords.blm.gov, accessed November 2, 2016; Walton-Buchanan, 39; Dangberg, *Conflict on the Carson*, 138-139; Dangberg, *Carson Valley*, 7, 63, 102, 110; Fred Dressler, *An Interview with Fred Dressler: A Contribution to a Survey of Life in Carson Valley, From First Settlement Through the 1950s*, by R.T. King, (Reno: University of Nevada Oral History Program, 1984), 2-4; Robert A. Allen, "Map of Carson Valley Lands, Douglas County, Nevada," NC97 Robert Allen Papers, UNR.
[54] Walton-Buchanan, 39; Dangberg, *Conflict on the Carson*, 138-139; Dangberg, *Carson Valley*, 7, 63, 102, 110; Elliott, *History of Nevada*, 116; Survey plat map for Nevada TS 12 N, R 19E, 1862, General Land Office Records, Bureau of Land Management, accessed November 2, 2016; *The Historical Nevada Magazine*, 84.

Aurora in Esmeralda County. To provide for easier transportation between the Tahoe Basin and Carson Valley, D.D. Kingsbury and John McDonald constructed the Kingsbury Grade toll road from Van Sickle's Station west over the Sierras to Shingle Springs in California in 1860. By 1863, that road alone had collected a total of $190,000 in travel receipts with nearly a thousand wagons per month passing through Carson Valley. Henry Van Sickle eventually purchased the road from Kingsbury and McDonald, and later sold it to Douglas County in 1889. These roads allowed for greater economic development in the valleys, but also shifted where that development occurred. Genoa, formerly the seat of activity in northwest Nevada, became peripheral to Carson City, as the roads bypassed the small town, keeping overland travelers and commercial wagon traffic in the central portions of Eagle and Carson Valleys.[55]

The influx of new farmers and ranchers created particular problems for the fledgling territorial government established in Carson City in 1861, specifically in land and water law. By the time of Nevada Territory's establishment, land law in the area was generally based on prior appropriation, meaning the first to settle and use land was considered the rightful owner. By contrast, the state distributed water flow by need with priority mostly given to mining interests, creating a complex web of rights and laws that would continue to aggravate economic development in the region. The establishment of the territory meant that the federal General Land Office placed a district office in Carson City to survey existing land claims and future areas for settlement within the territory. During this transitional period, many farmers and ranchers faced a great deal of uncertainty regarding their land claims. With the federal government dealing with land survey, the state government focused on the task of regulating and distributing water supplies within the state, especially the logging, mining, and agricultural interests competing for the same flow from the Carson River.[56]

As with most western agriculture, the availability of water and its regulation by state and local government controlled the development of farms and ranches in Eagle and Carson Valleys. Agriculturalists found the region's climate generally arid, with heavy snowmelt from the Sierra Nevada Mountains helping to keep the water table high. However, irrigation remained necessary to convey snowmelt from the river channel to fields to insure a season's crops due if rain was lacking. Under early governance, water in the Carson and Eagle Valleys was appropriated by need, not prior use, which left competing interests to determine their need without much regulation. Without a clear system of appropriating water, many ranchers established brush dams along creeks and rivers indiscriminately. Logging companies eager to supply timbers to the underground mines near Virginia City sought to use the Carson River and its tributaries for transporting lumber downstream. Finally, the milling companies themselves sought to divert water from the Carson to power their operations and process ore for ease of transportation. Despite the disparate demands placed upon the Carson River's water supply, early Douglas County administers had high hopes for the area's agricultural potential. In 1868, Douglas County Assessor S.C. Chase estimated that there were 50,000 acres of agricultural lands in the county, a seemingly accurate estimate considering that in 2017, after withdrawals for residential and light industrial development, the county still boasts 33,272 acres of agricultural land.[57]

In 1861, the territorial legislature first attempted to regulate the competing interests in the Carson River's water with targeted legislation. Territorial officials restricted commercial fishing along Nevada's riverways, specifically banning any nets, seines, traps, or other devices that might obstruct the flow of water. They also authorized improvements to the Carson River channel to expedite log drives for timber companies, but required the protection of existing irrigation dams. Solidifying their actions and showing the focus of the territorial

[55] Achard and Buedel, 42; Dangberg, *Carson Valley*, 12.
[56] Townley, *Alfalfa Country*, 42.
[57] Walton-Buchanan, 36; Townley, *Alfalfa Country*, 2, 41; *2011 Douglas County Master Plan*, Chapter 2, Land Use Element, 16, http://www.douglascountynv.gov/DocumentCenter/View/2494, accessed June 30, 2017.

government's attention on the Carson River, the legislature declared the Carson River unnavigable, ensuring the state's authority to regulate the river without federal involvement, despite the passage of logs and work boats across the state line. The next year proved a difficult balance between the two interests, aggravated by what was historically known as the Great Flood of 1862. In December of 1861, heavy snows fell across the western United States, from Oregon south into Sonora, Mexico, and inland from the west coast to Utah and New Mexico. Winter rainfall and a wet spring proved especially destructive throughout the season. The Carson River swelled and flooded its banks in January of 1862, destroying bridges, houses, and livestock. The flooding continued to a lesser degree into the spring as warm temperatures and heavy rainfall sent snowmelt into the Carson River watershed earlier and faster than normal. That spring, as loggers began using the Carson River to transport their milled lumber, lumber waste began floating over the woodmen's booms and dammed the river's sloughs and ditches completely, forcing water into neighboring fields and spreading sawmill debris in its wake. During the second territorial legislature in 1862, the Assembly and Senate agreed to require lumber companies to address this and prevent clogging of irrigation canals and ditches, but exempted the mining mills downstream. Amid this negotiation among interests, many ranchers began to fence their property to delineate their land-holdings more clearly and protect their property and crops from free-grazing livestock, Fred Dangberg's original 910 acres by 1861. However, Nevada's legislature remained silent on the issue of fencing and open range grazing until 1893.[58]

The canals and ditches constructed by logging, mining, and agricultural interests throughout Carson and Eagle Valleys aggravated water litigation and the Nevada legislature's attempts to address it. To provide water power for the burgeoning milling industry in Dayton and Empire, milling companies purchased or constructed existing ditches and conveyances to provide power. Various companies converted the 1858 Rose Ditch into a canal for powering four mills at the mouth of Gold Canyon in Storey County. In 1860, the newly formed Virginia Ditch Company in Carson Valley made plans to construct a canal along the West Fork of the Carson that would stretch from Hope Valley downstream to the mills at Empire east of Carson City. A Virginia Ditch still exists in Carson Valley, completed in 1863, but it diverts water from the East Fork above Gardnerville and now serves farmers rather than millers. Among the premier agricultural ditch builders was Henry F. Dangberg, Sr., who constructed or aided in the construction of dozens of ditches throughout Carson Valley. As irrigation networks in western Nevada refined, they supported some 45,000 acres of irrigated cropland. The expanded tilled acreage grew crops such as potatoes, vegetables, and fruit, and led to the development of processing industries in nearby towns such as flour milling and butter and cheese production. The competition between mining and agricultural interests for Carson River water stemmed in part from corruption in the state legislature in favor of mining interests, but also because the agricultural industry itself was vastly overshadowed by the mining industry in terms of how many people it employed and how it was supplied. Nearly 15,000 residents in Storey and Lyon counties depended on mining for their income through the 1860s, compared to less than 1,000 in Douglas County.[59]

While millers, loggers, and farmers all competed over the Carson River's water, the river itself proved difficult to control. Prone to winter flooding, the history of the Carson River reads as a periodic litany of destructive floods from the arrival of Euro-American settlers in the 1850s through to the present. Even in these early years, farmers and ranchers sought to control a river that frequently flooded its banks, wrecking fields, fences, buildings, and equipment across all three industries. After the disastrous floods in the winter of 1861-1862, the community tasked Henry Van Sickle, being the primary landowner along the West Branch of the Carson

[58] Walton-Buchanan, 36; Townley, *Alfalfa Country*, 2, 41-43; USDA-SCS, 4-5; Achard and Buedel, 42; Gary McCuin and Steve Foster, "Nevada Open Range Law," Fact Sheet 10-69, University of Nevada Cooperative Extension, 2010, https://www.unce.unr.edu/publications/files/ag/2010/fs1069.pdf, accessed May 9, 2017.
[59] Townley, *Alfalfa Country*, 151-152; Dangberg, *Conflict on the Carson*, 21, 28.

River's lower extent, with constructing the first flood control dam, specifically to compel the waters of the West Branch to remain in the channel during floods rather than deserting the channel and flooding over to the East Fork. Van Sickle's dam provided some protection, but the force of the river's water periodically compelled the West Fork to shift its channel and its junction with the East Fork. Many of these floods were wet-mantle, rain-on-snow, or frozen ground floods in colder parts of the year that became especially destructive as water-logged soil and ice exacerbated flooding throughout the valleys. These floods continue into the present, with the most recent episodes occurring in the winter and spring of 2017.[60]

Alongside flood management, new farmers and ranchers had to contend with the ubiquitous sagebrush, clearing the plants so the land could be used for hay production or pasture. Fred Dangberg developed a successful method for clearing sagebrush by flooding his fields to drown the sage, and then clearing it while the soil was still moist, allowing for the unobstructed planting of hay and grain crops. In addition to these mainstays, some farmers engaged in vegetable and fruit farming, although the climate limited what crops could be grown profitably. Thompson & West's 1888 *History of Nevada* elaborated that "the first thing after building a shelter, the farmer sets out an orchard." Many planted orchards soon after establishing their operations as the trees took several years to produce fruit. Vegetable crops required closer attention, and careful tilling and plowing to prepare fields for seed. On many farms and ranches, vegetable crops were overseen by the matron of the ranch, with assistance from children. However, late frosts in summer tended to wreak havoc on orchards without careful management, and generally reduced yields. For that reason, gooseberries, raspberries, strawberries, and currants, which perform better in colder environments, became more popular fruit crops for regional farmers. Although markets were local, such as Carson City, Virginia City, and Dayton, these still required most of a day for travel using horse-drawn wagons. Produce farmers relied on cutting ice in winter and storing ice blocks in ice houses on their property over the summer to guarantee their produce crops would stay cool and fresh to market.[61]

Although beef cattle remained the mainstay, dairying took hold early among area ranchers as a much sought after commodity in local markets. Owners of larger operations such as the Dangbergs eventually constructed special dairy barns on their property, often stone buildings that remained cool in the summer with the assistance of ice cut from mountain lakes in the winter and stored in underground ice houses. Most dairy farmers did not have the finances or resources to construct stone barns, and sent their milk to creameries in Carson or Eagle valleys. The creameries processed milk into cream, butter, and cheese for sale in nearby groceries and restaurants. Dairying in Carson Valley remained fairly low-key if steady until 1879 when the use of pedigreed Durham shorthorns became preferable by many dairy farmers, led by the example of J.W. Marsh. Marsh and his sons Wilbur and William arrived in the valley in that year and operated a ranch at the present-day southeast corner of State Highway 88 and Dressler Lane. According to valley historian Grace Dangberg, the Durham stock from the Marsh herd became the breeding base for much of the valley's dairy livestock after 1880. However, the Marshes sold in 1887 to the Dresslers, who later sold it to Dietrich Thran. It was Thran who, in 1914, built the house currently standing on the property. Alongside the rise in dairying in Carson Valley by the 1860s, alfalfa became a popular feed crop on the irrigated pastures in the valley.[62]

The combined production of hay, grains, dairy, beef, and produce, and the development of roads throughout the region to transport them, allowed for a marked expansion of agricultural development along the Carson River between 1864 and 1866. While the established Virginia City and Dayton markets remained strong, new markets to the southeast in Aurora and Pine Grove provided additional demand. Grace Dangberg argues that it was this

[60] Dangberg, *Conflict on the Carson*, 20-21; USDA, SCS, 4-55; Dangberg, *Carson Valley*, 40.
[61] Walton-Buchanan, 106-107; Achard and Buedel, 36,41; *History of Nevada*, 135, 374.
[62] DCNR-HP&A, Pickett, pp3-4; Moreno, 81-82; Walton-Buchanan, 107; Dangberg, *Carson Valley*, 110.

southeasterly avenue of demand that led to settlement and irrigation along the East Fork of the Carson River in Carson Valley, settled by families such as the Settelmeyers, Christiansens, Springmeyers, and Heidtmans. Staples such as alfalfa, bread, flour, butter, cheese, potatoes, and beef drove mining-focused agriculture. However, many farmers, especially those with farms in the valleys close to the Comstock, also produced luxury fruits such as raspberries, blackberries, peaches, and gooseberries,. Due to the high demand and price for fruit, orchards became a standard part of most farms and ranches in Carson and Eagle Valleys that persisted into the early twentieth century. However, the quick decline in silver prices by the 1870s meant that many had not come into full bearing before their local markets had failed, meaning most were used for family subsistence.[63]

Despite the importance of local agriculture to their neighboring mining communities, competing water interests continued to plague the state legislature and area farmers and ranchers. In another effort to clarify competing demands, the state legislature passed a law in 1866 requiring the recordation of changes to waterways such as irrigation systems with their respective county recorders. This precipitated a proliferation of water rights litigation between mining and ranching interests, aggravated by serious drought in the early 1870s. Water became so scarce in 1872 that William Sharon, one of Nevada's premier silver magnates and the majority shareholder in the Union Mill and Mining Company, ordered his crews to remove dams along the Carson between the California state line and the mill storage ponds in Empire. The following year, the drought became so severe that work stopped in the mills, even though new silver discoveries had been made near Virginia City. Some mining leaders considered water storage along the Carson River, but a wet year in 1874 and continuous strong precipitation through 1882 temporarily quelled concerns over sufficient water.[64]

Despite the relief provided by wetter weather beginning in 1874, the shortage of water in 1872 and 1873 spurred sufficient unrest over water use to prompt litigation between milling companies and agriculturalists, providing important insight into the agricultural developments over the region's first two decades of development. With William Ralston and his colleagues in control of the Union Mill and Mining Company, they consolidated not just 16 quartz mills, but the Virginia & Truckee Railroad and the Carson and Lake Tahoe Lumber Company under the Union Company umbrella. This provided them with a horizontally-integrated economic platform with which to reap financial returns but also to use as political and legal leverage. The Union Mill and Mining Company filed suit in 1872 against an array of ranchers along the Carson River, hoping to secure greater water rights for their struggling milling operations in Empire and Dayton. The testimony of that case provided detailed descriptions of several ranching operations and their water use. Among the defendants was Henry Dangberg who described his ranch at the time as follows:

> The soil upon said land is sandy loam. The land is agricultural and grass land. It produces grass, grain and vegetables. It is principally hay land. There is in the neighborhood of 1000 acres of grass land. The balance is grain land. It will not produce without irrigation. It will produce with water. There is no other source from which water can be obtained except from the Carson River and its branches…Both the East and West Forks of the Carson River and all their branches run through this land. The streams are generally known as the East Fork, Fred's Fork, Cottonwood Slough, the West Fork, and Brockliss Slough. The whole of this land with the exception of about one acre is enclosed. It has been enclosed since 1861. Benjamin Mast, C.E. Holbrook and myself located 960 acres of the land described in the answer in August, 1857. About 250 acres of this land was located and claimed by Mott prior to 1857. The balance of the land was occupied, located and claimed in part by Deitenrider and in part by Lightle and Bormer as early as 1860. I now have the title in fee to the whole of this land.

[63] Dangberg, *Conflict on the Carson*, 2; Walton-Buchanan, 36; Achard and Buedel, 36, DCNR-HP&A, Pickett, p4.
[64] DCNR-HP&A, Pickett, p4; Townley, *Alfalfa Country*, 2.

> To my knowledge, water was first used upon this land for irrigating purposes in the spring of 1858. All the water necessary to be used was used upon said land in the year 1858. I have continuously from year to year since 1858 used what water was necessary to irrigate this land and the crops grown upon it. There [have] been raised crops on said land each year since 1858. The average crop of hay cut since and including 1860 has been from 1100 to 1200 tons. The land has been irrigated partly by artificial ditches and dams, partly by open dams and partly by the natural overflow of the stream.
>
> The land slopes each way from the natural bank, so that the water will flow from the banks east and west and north and south. The river channels are wider than in early years. The willows have been cut away from the banks and we can not now turn water out of the river by the simple method formally used. There are great many dry channels or depressions made by washes or overflows in former years on this land. These are overgrown with grass now and form channels for the conveying of water over the land. The surplus water not consumed by vegetation finds its way back into the river by means of ditches and sloughs upon the surface or by seepage. There is no waste of water upon this land. What is not permanently absorbed, is taken back into the river.
>
> It will require 250 inches of water to irrigate 100 acres of grass land upon an average, as the water would naturally flow over the surface of the land constantly. The water would be required for irrigation in this quantity during the months of April, May, June and July, after which it would require about one half as much during August, September and October. My estimate of the quantity of water required for irrigating this land is without pressure, a surface flow with the fall of the country. It will require less water for grain. My judgment is that about one half of the quantity required for grass land is necessary for grain.
>
> Water was first turned out of the river upon this land by artificial means in the spring of 1858… This ditch was about 18 inches wide and three feet high. The water was next taken out through a ditch at the head of the island to irrigate the land, in the spring of 1860. This ditch except at the head, is still in use. This ditch is and was about two feet wide and three feet deep on an average… Since 1857, we have in conjunction with these ditches used brush and open dams to turn the water out of the river upon this land.
>
> During all the time since 1857, my right to use or my use of the waters of the Carson River has never been questioned by any person or persons except in this suit, and the suit of the Merrimac Mill Company in 1865, which latter suit was dismissed by stipulation. I also used, in conjunction with Ferris, the ditch known as the Lightle ditch… This ditch has been used since the year 1860, and has been continuously used during the irrigating season.
>
> I obtained interest in this ditch and the right to use water by the purchase of a portion of the Lightle and Bormer land, for the irrigation of which, the ditch was constructed.

Litigation throughout the state in the 1860s and 1870s generally resulted in favorable outcomes for mining interests. Generally, wet years produced no conflicts, but resulted in bitter disputes during dry summers. In Carson Valley, the mines hired watermasters to control the ditches and headgates, ensuring that adequate water went to the Carson City-area mills, but often leaving farmers and ranchers in the valley with little pasturage.[65]

In Carson Valley, the drought combined with the economic Panic of 1873 to force many original farmers and ranchers out of business. Stock numbers and acreage under cultivation show a sharp decline during this period. In Douglas County, cattle dropped from 5,801 to 1,590 between 1873 and 1874, and sheep declined from 4,000 to 1,900 head between 1873 and 1875, and cultivated acreage declined from 19,553 to 3,760 between 1874 and 1875. To the north in Ormsby County, cattle numbers dropped from 1,128 head in 1874 to 460 in 1875, although cultivated acreage remained fairly steady. While these numbers recovered by 1880, they signaled a

[65] Achard and Buedel, 63-65; Townley, *Alfalfa Country*, 12; White, *A New History of the American West*, 265-266.

serious loss for most area ranchers that forced them to sell their ranch steads to newcomers. German immigrants from Verden in Hanover and from Schleswig-Holstein, as well as Italians, and by the 1880s, Basques, purchased most of these failed ranches at low market prices, or acquired new land from the public domain. Among the Germans to follow the Dangbergs and Dresslers were the Settelmeyers, who arrived in Carson Valley in 1880 and began working for the Dangberg family before purchasing their own ranch in 1888. With the mines mostly shuttered by this point, many ranchers such as the Springmeyer, Dangberg, and Hussman families resorted to primarily sheep and beef cattle ranching by the 1870s as a means to remain competitive in the region. Dangberg recruited young men from Germany to work on his farm, and to become citizens and claim land under the 1862 Homestead Act, with many of these claims eventually being acquired by Dangberg himself. The Ferris family, into which Henry Dangberg would marry, established a dairy ranch in the north end of Carson Valley by 1864, later moving to Carson City in 1869 into a house at what is now 311 South Division Street (NRIS #79003438). These early families were the forerunners of a concentrated German-American agricultural community that thrived in Douglas County's two central towns of Gardnerville and Minden. For Fred Dangberg's part, he would come to amass nearly 25,000 acres of land in Carson Valley, including a home on Main Street in Genoa, running thousands of head of sheep and cattle and controlling or having an interest in most of the valley's irrigation systems. Access to national markets via the Virginia & Truckee Railroad allowed farmers and ranchers in the area to stay in business provided they shifted production into fewer varieties of higher volume crops or livestock, such as beef cattle, sheep, and alfalfa. A brief respite from these limitations came after the gold discoveries in Bodie, California that provided a temporary market to the south in the late-1870s via the so-called Desert Road. By 1875, the *Carson Valley Times* remarked that the valley's farms retained some 20,000 acres of fenced, irrigated fields, along with 3,500 fruit trees, and an array of berry bushes, all of which now depended on the few remaining residents of nearby mining towns, but mostly on Bodie, for economic activity.[66]

The 1880 Surveyor General's report noted that Douglas and Ormsby Counties were well-established as fruit and nut producers for these markets:

Number of Trees/Vines producing fruit/nuts in Douglas & Ormsby Counties, 1880		
Tree/Vine	Douglas County	Ormsby County
Gooseberry	10,000 vines	4,000 vines
Raspberry	10,000 vines	1,200 vines
Strawberry	6,000 bushes	2,500 bushes
Grapevine	50 vines	50 vines
Fig	0 trees	6 trees
Walnut	50 trees	12 trees
Almond	0 trees	0 trees
Apricot	60 trees	60 trees
Cherry	469 trees	610 trees
Plum	670 trees	650 trees
Peach	540 trees	5,700 trees
Pear	433 trees	62 trees
Apple	2,468 trees	5,700 trees

[66] DCNR-HP&A, Rowley, p5; Walton-Buchanan, 37-38; Achard and Buedel, 43; Glass, *Fred Settelmeyer*, 1-2, 10-11; Dangberg, *Conflict on the Carson*, 3, 21; Bancroft, 255; Douglas County Planning Department, *The Architectural Heritage of Carson Valley: A Survey of Genoa, Minden, & Gardnerville*, (Minden, 1981), 9; *History of Nevada*, 139-140.

At this time, Genoa remained the seat of government and commerce in Carson Valley. To the north, the capital city of Carson incorporated from Ormsby County in 1875, boasting by that time a sizeable business district, and satellite communities elsewhere in the county including Brunswick, Empire, Lakeview, and Clear Creek. Despite the periodic shortages of water, irrigation and railroads proved to be critical to allowing Carson River farmers to succeed, even when shrinking markets reduced prices.[67]

The respite offered by the Bodie discoveries allowed for continued mercantile development in Carson Valley. However, with the market drawing southeastward, entrepreneurs established the town of Gardnerville in 1879 near the eastern side of the valley, drawing economic activity away from Genoa (see Map 5). As a result, Genoa witnessed a steady decline of investment over the 1880s and 1890s. Beginning with the establishment of the Gardnerville Hotel by Lawrence Gilman in 1879, Gardnerville saw modest growth for the next two decades. By 1900, the newer town's main street boasted two livery stables, a woodworking shop, a boarding house, a tin shop, three general merchandising stores, a hall, four saloons, one meat market, one furniture store, a drug and confectionary store, and two hotels. In 1885, signaling the concentration of Germany immigrants in the area, various community leaders formed the Valhalla society to pass on information to newly arrived immigrants. Part of Gardnerville's economic successes hinged on its access to regional roads through Carson Valley that now looked at Genoa as too far from the main travel corridors. During the Bodie mining revival over the 1880s, Gardnerville was a resupply and rest hub for 24-hour-a-day freight teams on their way to the Virginia & Truckee Railroad terminus in Carson City. Also drawing economic energy from Genoa was Sheridan to the south. Although still small, Sheridan boasted a store, two hotels (including the Sheridan Hotel), a post office, a saloon, and a blacksmith and wagon shop.[68]

The momentum afforded by the railroad and by the Bodie market allowed area farmers to expand their network of irrigation canals and ditches throughout the 1870s. The 1874 Surveyor General's report notes that Douglas County had 35 ditches irrigating 18,953 acres, and Ormsby County had 5 ditches irrigating 1,100 acres. In 1875, Henry Dangberg added the Pinenut Creek Ditch to this network as a mechanism for accessing flood waters from this wash along the east side of Carson Valley. In 1876 he constructed the Ezell Ditch, siphoning water from the Cottonwood Slough along the East Fork, and acquired an interest in the Allerman Canal, which siphoned water directly from the East Fork. A collection of ranchers constructed the New Virginia Ditch to provide enhanced irrigation capacity for the existing ditch, siphoning water from the East Fork of the Carson two miles below the Allerman diversion. In 1877, the Dangbergs acquired the Gott Reservoir east of the East Fork, which became the first in a series of reservoirs constructed by the family to capture and store water from the Pine Nut Mountains. In 1878, the Dangberg family constructed the Buckeye Creek Ditch, which captured run-off water from Buckeye Creek, another waterway that was dry most times of the year except during rain events. This relatively rapid expansion of irrigation systems and irrigable acres would aggravate conflicts between Carson Valley agriculturalists and mill owners downstream during the next drought period of the 1880s.[69]

1880 to 1893 – Economic Adaptation to Downturn and Drought

The declining returns from gold and silver mines in settlements like Virginia City and Aurora starting in 1877 forced a transformation of the agricultural industry in Nevada. As mentioned previously, the link to the transcontinental railroad provided by the Virginia & Truckee Railroad after 1869 provided agriculturalists with a much-needed link to more diverse national markets like San Francisco and beyond to sustain their operations as nearby towns shrunk. Running from its junction in the relatively new town of Reno to a major depot in Carson City provided an economic lifeline for Carson and Eagle Valley ranchers during the late nineteenth

[67] DCNR-HP&A, Rowley, p5; Dangberg, *Conflict on the Carson*, 3, 21Douglas County.
[68] Douglas County Planning Department, 55; Dangberg, *Carson Valley*, 63.
[69] Dangberg, *Conflict on the Carson*, 3, 21; Bancroft, 255.

century. However, competition with California ranchers wintering their cattle in the valleys and an extended drought beginning in 1883 and lasting until 1893 placed severe pressure on all water users on the upper Carson River throughout much of this period. Declines in the need for mill water alleviated some of this pressure, but not enough to support all of the ranchers in the watershed.[70]

During this period, ranchers and farmers sought various means to offset the decreased value and demand of their products. Historian John Townley has cited land speculation as one strategy, supported by contemporary histories of the state from the 1870s and 1880s. Some Nevada boosters attempted to attract settlers to small farm plots watered by rivers and streams that were already over-appropriated for mining, timber, and existing ranch operations. For example the well-known *History of Nevada* published in 1888 by Thompson & West portrayed Carson Valley as a rich and successful farmland in that year, with nearly 30,000 acres enclosed by fence for farming. While land marketing carried on, larger ranches and speculators acquired most of the choice agricultural lands via federal land transfer laws such as the Homestead Act (1862), Timber Culture Act (1873), and the Desert Land Act (1877). What remained clear was that mining, railroad, and ranching interests dominated the state legislature and created political gridlock on the issue of water appropriation, preventing Nevada from formulating a state plan for managing water resources until federal involvement in the twentieth century.[71]

Alongside declining local demand, California feed producers and dairies outcompeted local Nevada producers on volume, and thus price. The respite afforded by the Bodie mines proved short-lived, as the subsequent extension of the Carson & Colorado Railroad from Dayton south into the Owens Valley in 1881 shifted the source for agricultural supplies such as fruits, vegetables, and barley from Carson Valley east to Mason Valley and south to Owens Valley in California. In Carson Valley, the primary response was to switch to cattle feed crops until market changes in the early 1890s. Aggravating the effects of market competition was the sustained drought between 1883 and 1893, which led to a crisis in agricultural production. Grain crops failed and alfalfa returns significantly declined, with the few remaining mills along the river shutting down operation until harvest season in that year. The primacy of milling interests meant that many farmers and ranchers who had grown accustomed to indiscriminate damming and diversion of the Carson River for their own purposes found their dams and canals destroyed by milling companies. Most notorious of these milling enforcers was John D. Ludwig, who administered water law along the Carson River throughout the 1880s. With stress on the watershed, calls from Carson Valley for state reclamation projects to store water in irrigation reservoirs dominated the 1888 state legislature, but no serious action would be taken until the federal Reclamation Act of 1902.[72]

Increased stress on water supplies and on available pasture and grazing land compelled some observers to demand closer management of the range's resources. Surveying the area between the Carson and Stanislaus Rivers in the Sierras in 1877 for the Army Corps of Engineers, Lt. M.M. Macomb observed the "scarcity of feed in the mountains." Macomb elaborated that:

> This was due to the fact that the country was completely overrun with vast herds of sheep, which utterly denuded the mountain valleys of grass, and in fact of nearly every green thing within their reach. This unusual influx of sheep was caused by the drought throughout Central and Southern California, the water-supply having failed on account of the light rain and snow fall of the previous season, the average being one of the smallest on record for years….There is no doubt that if the sheep continue to be driven up into

[70] Douglas County Planning Department, *The Architectural Heritage of Carson Valley: A Survey of Genoa, Minden, & Gardnerville*, (Minden, Nev., 1981), 9, 55; Elliott, *History of Nevada*, 116.
[71] Townley, *Alfalfa Country*, 2; *History of Nevada*, 373.
[72] Townley, *Alfalfa Country*, 66-68, 155; Dangberg, *Conflict on the Carson*, 29.

these mountains in such vast numbers the grasses will be killed out and great injury inflicted on the country."[73]

Macomb may have exaggerated the specific impact of sheep, but it was clear that overgrazing on the part of all interests had created a critical situation within the region's agricultural network. Drought and price declines had forced area ranchers to adapt, not always successfully. For Henry Dangberg in particular, sheep raising became a more important part of his operations by the 1880s than previously, with an operation that sold 20,000 pounds of wool in 1887 alone. Sheep proved able to graze in harsher environments and on less forage than cattle, compelling the shift. Dangberg moved his sheep into the Pine Nut Mountains early in the year after lambing, and then drove the herds west into Hope Valley in California southwest of Carson Valley in the summer. In the fall, they were brought into Carson Valley to graze off used pasture and cropland until he drove them back to the Pine Nut Mountains. Buckeye Ranch in the middle of Carson Valley was the base of operations for Dangberg's sheep raising (see Map 8). At the height of the operation, the Dangberg family had five to six bands totaling 10,000 to 12,000 sheep.[74]

With the surrounding public grazing lands failing or greatly depleted, feed crop production became a necessary part of sustainable ranching, and western Nevada ranches became a hub for regional alfalfa production. Alfalfa was a popular and nutritious feed that Carson and Eagle Valley ranchers exported to other stock raisers throughout the region. Hay production in the valley, especially with alfalfa mixture, became a mainstay of the economy on the upper Carson by the late-nineteenth century and into the twentieth, transitioning from feeding the oxen and horses of the teamsters to feeding beef and dairy cattle raised in the region that would be shipped by rail to market. The vacuum in the market left by failed, large-scale operations also provided an opening for many smaller-scale ranching outfits to expand into the open and free range.[75]

The former Buckeye Ranch property run by the Dangberg family, now owned by Bently Enterprises. Left: The storage warehouse (left) and blacksmith shop (right); Right: Housing and equipment staging area for ranch hands west of the warehouse and shops. (Both NVSHPO, July 7, 2016).

Despite the tumult of farming and ranching adaptations in the 1880s, many larger ranches sustained operations through the period, albeit suffering for lack of water and losses of financing after 1893. Thompson & West's *History of Nevada* provides a vignette of farming in Carson Valley by 1888, estimating that 200 miles of

[73] Macomb quoted in David Beesley, *Crow's Range: An Environmental History of the Sierra Nevada*, (Reno & Las Vegas: University of Nevada Press, 2004), 105.
[74] Achard and Buedel, 70, 83-84.
[75] DCNR-HP&A, Rowley, pp6-7; Walton-Buchanan, 96-99; Young and Clements, 44-45.

irrigating ditches ran off the Carson River, supporting yields of twenty bushels of oats and barley per acre, 250 bushels per acre of potatoes, 1.5 to 2 tons per acres of timothy-clover mixture, and three tons per acre of alfalfa harvested twice a year. Considering the drought conditions persisting in the region at the time of Thompson & West's publication, and the publishers' inclination for boosterism, it is likely that most of these crop returns were diminished, perhaps reflecting the very best output of choice land. Nevertheless, the ability of local farmers and ranchers to endure through the drought with reduced yields and reduced local markets is evidenced by their descriptions of individual ranches in the valley:

Name of Farmer/Rancher	Acreage	Thompson & West passage
Dangberg, Fred	4,648	Prominent among these is that of Fred Dangberg, five miles east of Genoa, who has 4,648 acres, all fenced. He has forty miles of irrigating ditches, leading water from the Carson River to this immense farm. In 1879 he had one field of reclaimed sage-brush land of 600 acres all sown to barley. About 1,500 acres are used expressly for grazing, and sustains nearly 1,000 head of stock. The crop of 1879 was 600 tons of barley and oats, and 1,600 tons of hay. Mr. Dangberg is an old resident, having settled in Nevada in 1853. Value of the property, $60,000.
Klauber, A.	1,830	A. Klauber, one of the early merchants of Genoa, and now of San Diego, California, owns a ranch of 1,830 acres, adjoining Mr. Dangberg on the north. Value, $30,000.
Frevort, F.A.A.	830	F.A.A. Frevort has a farm of 830 acres, inclosed, south of Mr. Dangberg's ranch. Value, $18,000.
Farmer, Benjamin	800	Benjamin Farmer cultivates 800 acres, seven miles south of Genoa, in the vicinity of Sheridan. Value, $15,000.
Van Sickle, Henry	1,800	Henry Vansickle's farm comprises 1,800 acres, two and a half miles south of Genoa. Value, $25,000.
Boyd, William H.	1,050	William H. Boyd has a farm of 1,050 acres on Carson River, one mile below Genoa. Value, $18,000.
Van Sickle, P.W.	620	P.W. Vansickle owns what is known as the old Haines Ranch, of 620 acres, three miles below Genoa. Value, $12,000.
El Dorado Wood and Flume Co.	440	The El Dorado Wood and Flume Company have 440 acres, with grist-mill. Value, $15,000.
Fray, Lawrence.	240	Lawrence Fray's farm, on the east side of Genoa, comprises 240 acres, and valued at $10,000.
Haines, J.W.	320	J.W. Haines owns 320 acres in the northern part of Genoa, upon which he has a fine dwelling, the whole valued at $12,000.
Springmeyer, Herman	480	One of the finest ranches in the valley is that of Herman Springmeyer, of 480 acres of superior land, lying five miles east of Genoa. Value, $12,000.
Jones, Joseph	790	Joseph Jones has 790 acres of magnificent land, with fine buildings, lying north of Genoa. Value, $20,000.
Child, John	640	John Child's ranch, adjoining the Jones' property on the north, of 640 acres, with its neat house and large barn, is valued at $20,000.

Crippen, H.C.	240	Ex-Sheriff H.C. Crippen, at the Twelve-mile House, twelve miles from Genoa, owns 240 acres valued at $8,000.
Dangberg, Chris	960	Chris Dangberg's farm, which adjoins Crippen's place on the northwest, embraces 960 acres, and is valued at $8,000.
Pettigrew, J.P.	440	J.P. Pettigrew has a ranch of 440 acres, north of and adjoining Chris Dangberg's land, which has all been reclaimed from sage-brush. Value, $8,000.
Ezell, L.S.	240	Adjoining and west of the Pettigrew ranch, L.S. Ezell has 240 acres, valued at $5,000.
Cary, Bartley	150	On the west fork of the Carson River, eleven miles from Genoa, immediately at the base of the Sierra Nevada Mountains, Bartley Cary has a farm of 150 acres, valued at $10,000.
Cary, William H.H.	170	William H.H. Cary's ranch of 170 acres, lying south of Bartley Cary's, is valued at $8,000.
Parke, David	280	Two miles north of Sheridan, on the main road, David Parke has 280 acres, valued at $10,000.
Parke, Hugh	280	Hugh Parke has 280 acres south of the [David Parke ranch], valued at $8,000.
Dressler, Fred	560	Fred Dressler has 560 acres near Sheridan, valued at $15,000.
Brockliss, A.R.	840	On the west fork of the Carson, one and one-half miles east of Sheridan, A.R. Brockliss has 840 acres, valued at $16,000.
Taylor, A.M.	517	A.M. Taylor owns 517 acres one and one half miles north of Sheridan, valued at $7,000.
Baldwin, John	440	Near the California line, in the upper end of the valley, four miles southeast of Sheridan, John Baldwin has a farm of 440 acres, valued at $8,000.
McGuin, Anthony	580	Anthony McGuin owns 580 acres two and one-half miles southeast of Sheridan, valued at $12,000.
Adams, J.Q.	820	J.Q. Adams has a farm three miles north of Genoa, of 820 acres, which is valued at $12,000.
Berry, Hanson	360	Hanson Berry's farm of 360 acres, situated three miles east of Sheridan, is valued at $10,000.

As usual, Carson Valley eclipsed Eagle Valley in sheer volume of agricultural production. By this period, the growth of Carson City as the state capital, with subsequent commercial and residential development, meant that a small city had emerged in the midst of what was already a much smaller valley floor than its counterpart to the south. Of those still ranching, Samuel Nevers produced hay and potatoes, and Aaron Treadway, known locally as "Farmer Treadway," maintained a public park on his ranch near present-day Williams & Mountain Streets. In 1880, the Surveyor General's report mentioned that "about 5,000 acres of [Eagle Valley] are inclosed [sic] with good fences, a large part of which is in a fine state of cultivation."[76]

In Carson and Eagle Valleys, grazing practices by large cattle companies that had been in place since the 1860s transitioned toward pasture-based Farm/Ranch Complexes around the turn of the century. Thompson & West's

[76] *History of Nevada*, 527-530.

history estimated in 1888 that around 10,000 head of livestock were scattered amongst these and the other various ranches of Carson Valley, requiring a great deal of forage and compelling greater reliance on cultivated feed. Summer ranges were still important, but after 1891, federal administrators controlled access to grazing areas in the eastern Sierra Nevada under the Forest Reserve Act as part of a collection of national forests, now administered by both the Humboldt-Toiyabe National Forest and the Lake Tahoe Basin Management Unit. At the same time, agricultural experiment stations established throughout the western United States under the Hatch Act of 1887 experimented with new feed crops from around the world in the hopes of better supporting struggling farmers and ranchers. The importation of sample seed supplies aided in the proliferation of non-native invasive plant species such as cheatgrass (*Bromus tectorum*), which traveled along with imported seed and naturalized. Cheatgrass in particular, native to the sage steppes of central Asia, was already well-adapted to harsh climates like that found in the Great Basin. As early as 1904, cheatgrass was present along roads and railroad beds in Reno, and within the next twenty-five years, it was abundant throughout the sage-brush steppe ecosystem. Russian thistle (*Kali tragus*), more commonly known as "tumbleweed," was another such invader from Eurasia that was generally absent from western landscapes until the late-nineteenth century. These invasive species found vectors in western Nevada as the region became a source for cereal grains such as those cultivated by the Carson Valley's leading ranchers, including the Dangbergs and the Dresslers. The development of large, steam-powered threshing machines allowed for the mechanization and expansion of grain farms, and allowed for these larger operations, or independent custom operators, to travel among smaller farms to process their grain crops. As this equipment was rarely cleaned between jobs, it accelerated the spread of invasive plants such as cheatgrass and Russian thistle. Furthermore, traditional burning to clear pasture or farmland that had previously favored native perennial grasses now provided avenues for the colonization of newly burned areas by cheatgrass. Some ranchers attempted to limit the growth of cheatgrass through repeated burning of areas where the brome dominated, with minimal success in the long-term.[77]

Litigation over water continued in the late-1880s as well, with water levels critically low by 1888. In that year, Carson Valley ranchers filed suit against upstream users in California who dammed increasing amounts of water from a river that had dropped so low that logging companies could no longer use it for transportation. Amid the shrinking supply of water, the power dynamic over water between mining and agricultural interests swung in favor of the livestock industry. In 1893, the Union Mill and Mining Company again sued over 100 Carson Valley ranchers for access to the Carson River's critically low water flow. The ranchers organized to fight the suit, eventually prevailing in an 1897 decision that affirmed prior appropriation rights to distribute water, a formula that favored the earlier ranching interests along the upper Carson River established in the 1850s. Carson Valley remained a focus of the state legislature's attempts to address the water supply issue in the 1880s and 1890s. Several desperate attempts to address the decreasing water supply emerged from the state legislature. In 1887, one official proposed to siphon water from Lake Tahoe to water 150,000 acres in Carson Valley, a project blocked by representatives of the Truckee River basin. The same legislative session authorized the expenditure of $100,000 to survey and construct the state's first reclamation reservoir on the upper Carson River. Legislators hoped the reservoir could be located on the Carson above the water-powered mills so as to avoid milling shutdowns during dry late-summer months. The state's Surveyor-General said of the proposed site in his 1889 report:

> At various points on the East and West Forks of the Carson River, and near their confluence, in Douglas County, dams could be constructed with great advantage to both the farmers and millmen, who now annually quarrel over a fair division of the scanty stream, the flow of which entirely ceases before summer is over, thereby causing the suspension of milling, and a consequent depression in all the industries of Western Nevada.

[77] Young and Clements, 45-46.; *History of Nevada*, 373.

Douglas and Ormsby County producers, recognizing that the Carson River was over-appropriated, even looked for federal funding to plan an upstream reservoir within California. However, corruption charges and bungled implementation meant that the state reservoir was never constructed and regional reservoir construction remained largely private. The Dangbergs built a series of reservoirs along the eastern side of Carson Valley, and the Dresslers constructed their own reservoir above their operation, known as Mud Lake. In the 1889 session, state legislator Francis Newlands pressed for a mill power reservoir in Carson Valley, but saw that effort hampered by H.F. Dangberg's subsequent claim of 5,000 acres of irrigable state land just below one of the best sites for the reservoir. Dangberg's actions also signaled his power and influence in the valley's agricultural scene, a position sometimes resented and challenged by other farmers in the area, especially the Springmeyer family. In the midst of this dispute, Herman Springmeyer often acted as an ally and land agent on behalf of Newlands. Further cause for delay came from the lack of available sites along the Carson River because so much had been transferred out of public ownership. Increasing public opposition from other areas of Nevada, and warnings from federal engineer Col. Lyman Bridges that the cost of such a reservoir would far exceed the appropriated $100,000, both aggravated delays and eventually forced abandonment of the project. Only the beginning of above average precipitation across most of the Great Basin starting in 1890 temporarily softened competition over the region's most precious natural resource.[78]

The State's emphasis on irrigated, intensive agriculture like that in Carson and Eagle Valleys was apparent in the laws passed by the legislature in the 1880s and the real estate practices of the private sector. Among the more simple, if still revealing, laws was Senate Bill 1994, introduced by Henry Dangberg in 1885 to regulate swine in agricultural areas, specifically holding the owners of swine liable for damages and requiring pigs to be enclosed. Pigs were often an auxiliary animal, providing relatively easy market returns while being fed off of scraps including wasted produce and skim milk. The 1885 Senate bill, along with the documented experiences of northwest Nevada ranches, signaled the ubiquity of pigs on these operations, but the bill does not appear to have passed – as late as the 1920s, Frieda Cordes Godecke recalled that as late as the 1920s, pigs were still allowed to roam freely, despite the damage they often caused to household gardens. Most successful legislation during this period still tended to favor open range ranching, with Nevada's open range law passed in 1893 and placing the obligation of fence construction to protect against damage from free-ranging livestock on the farmers who might receive the damage.[79]

In 1889, Francis Newlands contracted with Robert Fulton to negotiate land and water rights deals in Carson Valley related to the former estate of William Sharon. Fulton's task was to facilitate a conclusion to the litigation between mining mill owners and Carson Valley ranchers and convince the Dangbergs and others to drop their options on lands in upper Carson Valley. Newlands hoped that with the settlement of the region's water issues, the Sharon estate lands could be sold as family farms at a profit and increased agricultural production in the area could be realized through enhanced reclamation. Newlands' Carson River prospects focused on three areas. The upper site of 4,000 acres was situated in Long Valley in California adjacent to the Dangberg's 1889 land entry. Newlands hoped this might be the site of a private reclamation reservoir to serve Carson Valley farmers. A second site was near Cradlebaugh Bridge, and intended to impound water for area mining mills. The third was below Dayton and was hoped to serve famers in the Carson Sink in Churchill County. Newlands' hope with this ambitious project was to create a privately owned irrigation system that could supply area farmers throughout the watershed and help pull Nevada from its economic depression. Although Newlands' project on the upper Carson never came to fruition, the need for improved water management was certainly present. Douglas County's section of the Carson River hosted six saw mills and two

[78] Townley, *Alfalfa Country*, 12-14, 112, 120-121, 134-135, 159-160; Dangberg, *Conflict on the Carson*, 256-257.
[79] Townley, *Alfalfa Country*, 138; McCuin and Foster; Frieda Cordes Godecke, *After Centerville*, no date, 10-20.

hundred miles of irrigation ditches, producing forty thousand pounds of butter annually, and with farms valued at over $500,000 by 1885. The volume of use would force improvements in later years.[80]

The global Silver Panic of 1893, some area farmers looked to other options to sustain their operations, namely grain milling and dairying. With silver being a premier commodity of Nevada's economic engine, the reduction in residential, commercial, and industrial development was dramatic, and affected farmers and ranchers as the banks that they relied upon for lending capacity shuttered. This, combined with prolonged drought and market changes for agricultural products, precipitated a regional campaign in western Nevada for self-sufficiency, as many larger farmers in the area attempted to form mill cooperatives and expand dairy operations that had previously been secondary. As early as 1891, several of Carson Valley's most prominent farmers and ranchers, including Fred Dangberg, Fred Dressler, H.H. Springmeyer, and D.B. Park created the Carson Valley Mill Company. The company sought partners from as far away as Mason Valley and used the Cohn mill in Carson Valley as its base of operations, although the venture failed early on. Nevertheless, dairying remained an increasingly important part of the region's economy. Even relatively new ranchers such as the Settelmeyers began growing their operations for dairy production and feed supplies, with the Settelmeyers purchasing an additional 640 acres from the Occidental Land Company, operated by the Newlands family, and raising both beef and dairy cattle. The Dangbergs, Dresslers, and Springmeyers would later join together again to create the Minden Flour Milling Company based in the future Dangberg-constructed town of Minden. Also in 1891, 43 other Carson Valley ranchers formed the Carson Valley Creamery based at Dangberg's Home Ranch in Carson Valley. By August, the creamery was constructed near what is now the northwest corner of Mottsville Lane and State Highway 88, mostly managed by Julius Kaupisch. The plant began production in September and rapidly grew to process 17,000 pounds of milk daily into 600 pounds of butter and cheese as output, with skim milk supplying feed for hog raising. On November 10 of the year, the corporation deeded the property to the Nevada Creamery and Commercial Company headed by Evan Williams of Empire in Ormsby County. In October of the following year, the company deeded the land to the California-Nevada Creamery Company, a conglomerate overseen by various Comstock interests including the former William Sharon estate, managed by Francis Newlands. The company eventually operated four creameries–one in Smith's Valley, one in Fredericksburg, one on Francis Newlands' ranch near Fort Churchill, and one in Carson Valley–but it deeded the Carson Valley operation to William Dangberg in 1896. Frustration over management of the Carson Valley Creamery by 1893 led 42 area ranchers led by John Frantzen, C.M. Henningsen, H.C. Dangberg, Fritz Heise, and Christ Rabe to create the Douglas County Creamery, located along Waterloo Lane a half-mile west of Highway 88 (see Map 11). This trend reduced the profitability for the California-Nevada Creamery Company compelling them to sell back their creameries to local ranchers who operated them alone or formed cooperatives.[81]

1893 to 1945 –Progressive and New Deal Agriculture on the Upper Carson River

The rise of Progressivism throughout the United States meant that farming and ranching along the upper Carson River became more tightly managed, and more tightly bound to trends in federal land and natural resource management. This was expressed most forcefully along the upper Carson River in the form of reclamation projects to support the farming and ranching along the river's route through Nevada. Activity began in the private sector, but compelled Francis G. Newlands, now a U.S. Senator for Nevada, to press for a national reclamation service, a move that also led to the overhaul of the state's water laws. Both the new U.S. Reclamation Service (now the Bureau of Reclamation) and changes in Nevada state water law had a significant effect on Carson and Eagle Valley farmers and ranchers. In 1903, the state legislature created the Office of State Engineer, responsible for administering water rights and issuing water use permits. Considering the engineer's ability to influence or dictate water priority, the office exerted considerable control over Nevada's agricultural

[80] Townley, *Alfalfa Country*, 138, 142-143.
[81] Townley, *Alfalfa Country*, 68, 128, 171; Achard and Buedel, 85, Dangberg, *Carson Valley*, 110-113; Glass, *Fred Settelmeyer*, 3.

development in the twentieth century. With the Forest Reserve Act of 1891 bringing public grazing ranges above Carson Valley under tighter control, the reliance on irrigated pasture and hay production became all the more critical. The centralization and increasingly tight management of public lands coincided with the increasingly absentee ownership of many of Nevada's industries, including agriculture. Over this period, as homesteads failed and agriculture experienced continued drops in prices and shrinking liquid assets, out-of-state property owners controlled a greater and greater share of the state's farmland. By the early twentieth century, only 100 corporations or individuals, most of whom were incorporated or lived outside of Nevada, controlled 75% of the private land within the state, propelling a long-term shift from small family farms to large-scale industrial operations. However, despite the increasing use of mechanized equipment into the early twentieth century, draft horses continued to be the mainstay for power on even the largest of ranches. The reality of absentee ownership further propelled the rise of local agriculture in this period, both out of economic necessity and out of cultural resentment against out-of-state interests. [82]

Among the efforts to reseat the focus of agriculture in Nevada on local farming was a renewed emphasis on reclamation, propelled in part by continued growth of the upper Carson's dairy operations. The increasing use of the Carson and Truckee watersheds for dairying demanded adequate water for livestock, pasture, and hay crops. Nevada dairying in Carson, Eagle, and Washoe Valleys and the Truckee Meadows, had been growing swiftly as dairy farmers supplied markets outside of Nevada by the early 1890s. In 1892, the state's Surveyor General noted that the butter production of the state had increased to 231,000 pounds, as opposed to an average hovering around 20,000 pounds in previous decades. A year after the Douglas County Creamery's incorporation in 1893, representatives of the cooperative ventured to San Francisco to market their goods, earning a contract to supply the city's well-known Palace Hotel, with Carson Valley butter also winning the gold medal in San Francisco's Mid-Winter Fair that year. The notoriety generated more demand, compelling dairy farmers to build new dairy barns that were larger, could shelter more livestock, and could store more hay. The processing of dairy products at the Douglas County Creamery led to the establishment of the community of Waterloo just to its west, now near the intersection of Mottsville Lane and State Highway 88 (see Map 11). Several ranchers who were either German immigrants or of German descent established ranches around Waterloo, which became the hub of dairying in Carson Valley for a time. As mentioned above, in 1893, a group of 42 area ranchers led by John Frantzen, C.M. Henningsen, H.C. Dangberg, Fritz Heise, and Christ Rabe established the Douglas County Creamery in 1893, located along Waterloo Lane among the ranches of the Henningsens and Stodiecks. In 1895, Adolph Rolfs, a German immigrant, purchased eight acres at this crossroads which included a blacksmith shop. Rolfs constructed a house here, but quickly sold it to Henry Neddenriep of Diamond Valley in 1907. The former California-Nevada Creamery building near this location became a dwelling for the Goldstein family, and by 1907, H.W.F. Luhrs purchased the Behrmann property in the hamlet and expanded the bar and boarding house with a dance pavilion, creating a resort and community center. All manner of valley residents engaged in the dairy business, including Mrs. Hugh Hansen, who supplied butter to Walley's Hot Springs, and Mrs. A.M. Taylor, formerly Mrs. Israel Mott, who supplied the Glenbrook Inn at Lake Tahoe. The wealth generated in the valley allowed farm and ranch owners to construct so-called "butter built" homes, new and larger homes on farm and Farm/Ranch Complexes financed with dairy wealth. Among these constructed in the 1890s and 1900s were those of the Dresslers, Lampes, and Henningsens. However, the success of the dairy industry, especially for the Dangberg family, quickly shifted the focus of dairy processing from the Douglas County Creamery to the Dangberg's newly constructed town of Minden, which included the Minden Butter Manufacturing Company, constructed in 1908 by a collection of farmers including R.W. and Dick Bassman, Fritz Schacht, H. Luhrs, Dick Fricke, William Dangberg, and C.E. Merrick. As a result of the lost business, the Douglas County Creamery shut down in 1914, having been run over its 21-year life primarily by the Heise,

[82] DCNR-HP&A, Rowley, p9, White, 268.

Henningsen, and Stodieck families. The Minden Butter Manufacturing Company continued to operate until 1959, selling butter under the Windmill Brand, mostly supplied to the California coast.[83]

As economic competition forced refinement and environmental fitness among the region's beef and dairy herds, breeding became increasingly important. Prior to 1918, Durham short-horns had served as multi-purpose cattle, used for beef, work oxen, and milking. By the early twentieth century, farmers and ranchers, sometimes in partnership with the University of Nevada, Reno's Agricultural Experiment Station, began testing varieties of cattle for their hardiness and milk productivity. In 1918, when Mrs. J.B. Dangberg was on a visit to Missouri, she noted the registered Hereford stock of W.N. Collier in Fulton. The following January, the Dangberg Land & Livestock Company sent cattle foreman Fritz C. Neddenriep to Missouri, and eventually purchased a foundation herd for the company's Hereford breeding stock. William F. Dressler hired Neddenriep to do the same, and these herds became the foundation for a conversion of all of Carson Valley's beef cattle to Hereford varieties.[84]

Alongside the dairy and beef industries in the region, the sheep industry in this period also saw marked growth. By the late 1890s, the Douglas County Assessor reported that 13,000 head of sheep grazed in the valley; by 1925, the same office reported 25,000 head, equaling an annual wool clip of 250,000 pounds. Early in this boom, Basque sheepherders became an important labor force in the care of sheep on German ranches and farms in Carson Valley. Several Basque boarding houses sprung up in nearby towns, including the Pyrenees Hotel in Gardnerville, operated by Joe Micheo. Although the Dangberg family appears to have been the largest of the area sheep operators, many others began developing sizeable sheep operations in both Carson and Eagle Valleys by the turn of the century, including the Dresslers, Jacobsens, Parks, Bordas, and Uhaldes. The Dresslers relied on Basque herders to help maintain their operations from the 1900s to the 1930s. In Carson Valley in particular, Basque herders became a trusted labor force in the region's sheep industry, especially after its growth in the beginning of the twentieth century.[85]

With the livestock industry reviving by the early 1900s, support for reclamation projects in northwest Nevada saw renewed interest to support irrigation of hayfields. Advocates for reclamation reservoirs hoped that a series of additional dams along the Carson would serve a dual purpose, not only storing irrigation water, but providing flood control for downstream property. As late as 1893, the *Genoa Courier* called for a new dam to force the West Fork back to its original channel to avoid crop losses and ensure farmers on the west side of the valley had access to sufficient water. From 1895 through the 1920s, various private ranchers and farmers, and the corporations of which they were a part, constructed dozens of reservoirs in the mountains south and west of Carson Valley, most of them in Alpine County, California along the upper extent of the Carson River branches and their tributaries. The majority of these reservoir and canal projects were not aimed at expanding the farmed acreage in Carson and Eagle Valleys as these were already generally maximized. Rather, they were focused on providing crop security to farmers who had experienced significant hardship in the recurring drought cycles of the region. The success of these largely private irrigation projects, primarily for Carson Valley, meant that when federal reclamation officials looked to select an area in Nevada for one of the nation's first reclamation projects, they avoided Carson Valley only because it had already been settled, transferred out of the public domain, and adequately irrigated, leading them to select Churchill County on the lower Carson as the project's target.[86]

This landscape of privatized reclamation saw increased investment in the 1890s. Leaders in northwest Nevada incorporated the Alpine Land and Reservoir Company with the intent of purchasing land in Alpine County,

[83] Dangberg, *Carson Valley*, 112-115.
[84] Dangberg, *Carson Valley*, 122-123.
[85] Dressler, 47-48; Dangberg, *Carson Valley*, 127-131; Dressler, 46-47.
[86] Dangberg, *Conflict on the Carson*, 138-139.

California and constructing reservoirs to irrigate nearly 16,000 acres of farmland in Carson Valley. Among their first moves was to purchase fifteen existing reservoir sites already constructed by individual owners. Many of these reservoirs appear to have been naturally-occurring mountain lakes where ranchers had added dams to increase their capacity, such as Red, Scott, and Crater Lakes. The relatively small company quickly amassed priority water rights for 4000 acre-feet of water annually. In the summer of 1896, crews from the company began placing floodgates on several unclaimed lakes to increase their storage capacity and provide for managed outflow. Concurrently, the company purchased 8,000 acres of land in Carson Valley from the Occidental Land and Improvement Company, the Sharon family subsidiary, to be subdivided and sold as small family farms. The project became one of the first inter-state reclamation projects, with the land from Occidental on a two-year option, with the company hoping to offer land for sale to settlers in 1897. However, with an especially dry summer in 1898, Douglas County farmers and ranchers eyed the improvements for purchase, and by 1900, several of the more influential ranchers of the valley collectively purchased the company's entire system of eight reservoirs and subsequent canals. After the purchase, among the improvements ranchers made to the system included a dam at Lower Kinney Lake on upper Silver Creek and the Kinney Meadows Dam that created the Kinney Reservoir on upper Kinney Creek, both constructed in 1908.[87]

In addition to purchasing the Alpine Land and Reservoir Company, several well-known ranching families along the Carson's West Fork began acquiring and improving reclamation resources for their own operations. Among the best known of these were the Dresslers represented by William F. Dressler, the Settelmeyers represented by F.H. Settelmeyer, and William Neddenriep, all of whom developed their own irrigation systems to protect against the severe droughts that had hampered agriculture in decades prior. For the Dresslers, the small ranch that August F. Dressler had begun in the 1860s had grown into a large and complex operation. August Dressler's son, William Frederick Dressler, expanded the ranch's holdings to over 80,000 acres in Nevada's Carson and Smith Valleys, as well as around Bridgeport, California to the southwest. William served as the director of the Carson Valley Farmers Bank in Minden (NRIS# 00000338) as well as a state senator in the Nevada legislature. Much like the Dangbergs, Dressler invested in irrigation systems, building a reservoir that created Mud Lake to provide water storage for his cattle, as well as the Plymouth Canal in Smith Valley. Like many major ranchers, he established a creamery and flour mill on the Dressler family holdings to process the milk and grains produced on his vast acreage.[88]

The federal Truckee-Carson Irrigation Project driven by Francis Newlands proved controversial as a result of the competing appropriations between area ranchers and the United States, especially regarding projects for which ranchers filed water claims after 1903. With the memory of conflicts with mill owners still fresh for upper Carson farmers and ranchers, the prospect of losing even more river water to a new collection of downstream farmers yet to arrive galvanized local opposition to the federal reclamation project. The Truckee-Carson Irrigation Project, later renamed the Newlands Irrigation Project and overseen by the U.S. Reclamation Service, combined water rights from both the Truckee and Carson Rivers to provide irrigation water to new farm plats in communities such as Fallon, Stillwater, Fernley, and Wadsworth. In 1902, the Department of the Interior filed with the newly formed Nevada State Engineer's office for 5000 cubic feet per second of water from the Carson River to irrigate 232,000 acres of land in Churchill County, where the Carson River emptied into the Carson Sink. After the passage that year of the Reclamation Act, which assigned the new Reclamation Service to the Department of the Interior, the Department filed for an additional 1500 feet per second of water from the Truckee River to be diverted to a proposed reservoir in western Churchill County. This move compelled the federal government to file suit in federal court to adjudicate water rights along the Carson River in *United States v. Alpine Land & Reservoir Company*, a case not finally settled until 1980. As part of the

[87] Townley, *Alfalfa Country*, 178-179, 205; Dangberg, 20-21, 105-106, 348-351.
[88] Walton-Buchanan, 40; Dangberg, *Conflict on the Carson*, 138.

documentation for the government's case, federal engineer Richard Allen meticulously documented the irrigation networks existing on the upper Carson, providing an unusually high level of detail for Carson and Eagle Valleys agricultural landscape in the 1910s. Allen and his team provided a complete recording of land ownership and irrigation systems in that decade. In 1913, Allen's team recorded 117 irrigation ditches and canals in Carson Valley alone, providing water to well over a hundred sizeable ranches in excess of 200 acres each.[89]

The emphasis on water storage and general increase in agricultural production in the 1910s and 1920s compelled upper Carson River ranchers to expand their tilled acreage further, not only for increased profits but to bolster the tax revenue of Douglas and Ormsby Counties. Between 1912 and 1914, Carson Valley ranchers who were concerned about competition with the Carson-Truckee Irrigation Project entertained the idea of extending the project's administration into the valley in an effort to ensure their access to sufficient irrigation. On January 17, 1914, a group of 57 ranchers from the area, including major figures such as H.F. Dangberg, C.M. Henningsen, and William Settelmeyer, met in Minden and created the District Number One Carson Valley Unit of the project in partnership with the U.S. Reclamation Service. Part of their motivation behind forming the district was the hope that federal funds could be used to expand the irrigated acreage in Carson Valley. Although the Reclamation Service seriously considered the proposition and researched reservoir locations in Long Valley south of Gardnerville, the project never materialized due to disagreements over the value of the private land to be sold to the Service for the project. By 1922, area ranchers revived the idea of a private reservoir project in Long Valley, encouraged by acts in the Nevada legislature in 1913 and 1919 that established a means by which landholders could join into private water districts even if they had not invested in the venture at the beginning. Despite the absence of federal dollars for reclamation, the H.F. Dangberg Land & Livestock Company, the consolidated company for the Dangberg family, developed land ventures north of Minden intended to spur agricultural development in the region, and perhaps make up for diminishing financial returns in the years following the First World War. The Dangberg Company began selling some of its land holdings in the 1910s via a project they titled the Minden Irrigated Farms. The company platted fifty-acre farms and marketed them to would-be farmers with accompanying water rights via brochures and sales companies. The first unit of the Minden Irrigated Farms project was platted northeast of the burgeoning town of Minden. The Dangbergs were not alone in beginning to subdivide and market their territory; L.H. Taylor, the consulting engineer on the newly formed District Number One began marketing his own, selling small tracts at $100-$125 an acre. The concept appears not to have taken hold, as most of the territory north of Minden remained in Dangberg's ownership, with very few new farmsteads sold east of the road to Carson City.

With the changes in Nevada's water law providing more solid footing for private reclamation efforts, the number of private dams, reservoirs, and canals expanded beginning in the late-1910s through the following decade. William Dressler, along with Settelmeyer and Neddenriep, acquired the Red and Scott Lakes in Alpine County, California from the Alpine Land and Reservoir Company between 1918 and 1919, and improved them alongside the improvement of a dam at Crater Lake, giving them access to a collective 2159 acre-feet of water annually. In another effort to establish a collective irrigation district under the 1913 and 1919 laws, a committee including William Dressler, Louis Stodieck, A. Settelmeyer, M. Mack, L.H. Taylor, H.F. Dangberg, J.B. Dangberg, F. Fricke, and L.P. Jacobsen led the effort surveying sites in Long Valley along the East Branch of the Carson River and in Diamond Valley along Indian and Scott Creeks. The committee's report to the Douglas County Board of Supervisors concluded that a Diamond Valley reservoir was ideal, estimating that the project

[89] Dangberg, *Conflict on the Carson*, 127; U.S. Department of the Interior, Bureau of Reclamation, *The Bureau of Reclamation: Origins and Growth to 1945*, Vol. 1, by William D. Rowley, (Denver: 2006), 91; U.S. Department of the Interior, U.S. Reclamation Service, "Truckee Carson Project – Carson Valley Ditches," by D.S. Strives[sic], map #34, Subseries 8, Richard A. Allen Papers, NC97, University Archives & Special Collections, University of Nevada, Reno (hereafter, UNR).

could store 29,000 acre-feet of water for around $474,000 in construction costs, meaning water for 15,000 acres with much left over to enhance irrigation on existing farmland. Another valley rancher, George Springmeyer, led an opposition to the proposed district, expressing concerns about the long-term financial obligations of such a project on the irrigation district. As the Indian Creek Reservoir and Harvey Place reservoirs were underway, other projects emerged including one led by Fred Gansberg, Fred Bruns, the Wennhold Brothers, and the William H. Rowe Trust Fund who collectively developed and held rights to 219 acre-feet of water in Upper or East Lost Lake and Lower or West Lost Lake beginning in 1924. The Dangbergs acquired and constructed a new reservoir at Heenan Lake along Monitor Creek in Alpine County in 1924, hoping to enhance the irrigation available to their subdivided farm projects in Carson Valley. The lake held up to 4160 acre-feet, with the Dangberg Land & Livestock Company owning 2948 acre-feet of water right that the company began using by 1928.[90]

Pressure on farmers and ranchers over water rights, concern about the longevity of their operations, and the rise of new mining markets throughout the state led to the consolidation of many family operations under umbrella companies, and ultimately led to the founding of the Town of Minden as the new center of Carson Valley (see Map 5). Many successful ranchers in the area began consolidating their holdings into corporations to cooperatively handle multiple aspects of their operations, from water management to marketing and distribution. Several began forming cooperative efforts to market their produce both in Nevada and outside the state. The aging Fred Dangberg incorporated his vast land and water rights into the H.F. Dangberg Land and Livestock Company in 1902, in order to pass the over 30,000 acre operation more easily to his sons. Taking charge of the operation was Dangberg's oldest son, Fred Dangberg, Jr. With the company also needing an expanded irrigation infrastructure, between 1902 and 1906 the Dangbergs contributed to the extension and enlargement of the Allerman Canal and built the so-called Eastside Reservoirs, or Allerman Nos. 1, 2, and 4. The Eastside reservoirs, all built in 1906 north of Minden and Gardnerville, could hold up to 1552 acre-feet of water from the East Branch of the Carson River and Buckeye Creek. Fred Dangberg, Jr., envisioning a much larger operation, granted a right-of-way for an extension of the Virginia & Truckee (V&T) Railroad south into the valley and donated 158 acres for the construction of the new terminal for the railroad. In September of 1905, the V&T began laying track south from Carson City, with the line completed by 1906. Fred Dangberg, Jr. named the new town that sprang up at the terminus Minden, after the county seat of his father's home province of Halle, Germany. With the town founded and railroad line completed, several agricultural business partners including Fred Dangberg, Jr., William F. Dressler, C.M. Henningsen, Richard Bassman, and C.H. Springmeyer, established the Minden Flour Milling Company in 1906, constructing the Flour Mill (NRIS# 78001721) the following year and a creamery building in 1908, directly at the end of the train line. East of the mill, the Dangberg Land & Livestock Company built a warehouse space that became the Myers Mercantile Store, which opened in 1907. The Mercantile would later be named the Farmers Cooperative Mercantile after 1915 and stood on that location until its demolition in 2015. The mill was capable of producing 100 barrels of flour per day, and the creamery turned out 30,000 pounds of butter per month. The high demand for processing led to the addition of four silos onto the flour mill in 1908. The creamery was expanded into a larger, brick plant named the Minden Butter Manufacturing Company in 1916 (NRIS# 86002263). It was joined by the large, brick Minden Wool Warehouse (NRIS# 86002261) constructed the same year. The development and relatively quick growth of Minden as the new center of commerce in Carson Valley compelled Douglas County to move its seat of government from Genoa to Minden in 1916.[91]

[90] Walton-Buchanan, 40; Townley, *Alfalfa Country*, 178-179, 205; Dangberg, 20-21, 105-106, 138-139, 223-224, 229-231; Achard and Buedel, 115-123.
[91] Walton-Buchanan, 38-39; Achard and Buedel, 101-109; Douglas County Planning Department, 9, 33.

By the 1910s, the H.F. Dangberg Land & Livestock Company owned nearly 38,000 acres in Carson Valley, concentrated at four main ranches: the Home Ranch, Klauber Ranch, Buckeye Ranch, and Sheep Camp. Each ranch had a foreman with a residence on the property, as well as a full-time cook and kitchen. All of the ranch employees lived on each ranch in bunkhouse accommodations. Every ranch also had its own dining room blacksmith shop, barns, and equipment outbuildings. The Home Ranch was the base of the Dangbergs' dairy operation, and included barns for the livestock, a slaughterhouse, and a hide house. The former Klauber Ranch headquartered the company's beef cattle operation, and stabled most of the company's riding horses. The Buckeye Ranch was the largest of the four and headquartered the crop and sheep production. In 1907 alone, the Buckeye Ranch produced 1,085,000 pounds of barley and 213,000 pounds of wheat. The ranch included a large vegetable garden to sustain the four complexes and their staffs. The main equipment storage and servicing was also based at Buckeye. The Sheep Camp Ranch, despite the name, actually focused on crop agriculture, including small grains and alfalfa, but included loading pens for livestock next to the Virginia & Truckee Railroad right-of-way. To market products outside of Carson Valley, Fred Dangberg, Jr., and other farmers organized the Carson Valley Hay and Produce Company in 1909. They constructed a large storage barn northwest of the creamery and flour mill and operated until 1923 when a windstorm destroyed it. The expanded activity required substantial financing, and the Dangbergs again saw to it that the Carson Valley Farmers Bank (NRIS# 00000338) was constructed on their townsite at Esmeralda and 4th Street in 1909. Business expanded so quickly, however, that a new, larger bank was constructed across the street in 1918 (NRIS# 86002264), designed by Frederic DeLongchamps. The Hay and Produce Company provided supplies throughout the state during Nevada's copper and gold boom in the early 1900s, selling goods by rail in towns as distant as Tonopah, Goldfield, Luning, and Mina via the Carson and Colorado Railroad and its connecting railways.[92]

To the north in Eagle Valley, ranchers maintained their operations within the relatively small capital city. In 1912, much of Carson City's western half, along Ash Canyon and Kings Canyon Creeks, was still agricultural, with open fields and ranch steads operated by C.W. Robinson and H.M. Anderson straddling Kings Canyon Creek as it outlets into Eagle Valley (see Figure 1 at end of document). Both Farm/Ranch Complexes are still present, although most of their accompanying land has been subdivided and developed into housing since the 1950s. Just north of them, the Ash Canyon Ranch was operated by W. H. Metscher, nick-named the "prune king of Carson City" for his operation of a plum orchard at the mouth of Ash Canyon, producing over a ton of the fruits annually by 1915. Steve Belli, a Swiss-Italian immigrant, acquired the nineteenth century Meyers Ranch which now straddles Fifth Street east of downtown near the State Prison. In 1936, Sam and Eva Lompa purchased the Belli ranch and established a dairy operation there. They initially sold their dairy products to the Minden Butter Manufacturing Co. (NRIS# 86002263) but after that operation closed, switched to raising beef cattle. They steadily sold off or donated much of their holdings for projects such as Carson High School (1970), the U.S. Interstate 580 corridor (2014), and most recently, a pending housing development to be constructed in 2017.[93]

Despite the proliferation of irrigation reservoirs and canals throughout the upper Carson River network during the 1920s, agriculturalists found their economic returns increasingly threatened by nation-wide trends in crop markets. An agricultural depression following the First World War drastically reduced crop prices throughout the country, with its effects felt sharply by northwest Nevada farmers and ranchers. The H.F. Dangberg Land & Livestock Company issued a $750,000 sale of bonds in 1921 to provide capital for their operations, signaling the strain of the agricultural recession. The company took on an increasing amount of debt during the 1910s and 1920s, an issue exacerbated by the stock market crash of 1929 and subsequent Great Depression. The result was

[92] Achard and Buedel, 105; 166-173; Glass, *Fred Settelmeyer*, 8.
[93] Moreno, 83; J.C. Wehlbruck, "Eagle Valley, Carson City and Carson Valley, Nevada," photograph, 1912, UNRS-P1992-01-5981, UNR; "Produces Fine Prunes," *Goldfield Daily Tribune*, June 1915, Central Nevada Museum Archives, Tonopah, Nevada.

a crippling amount of debt for the Dangbergs that carried forward into the 1940s and eventually forced the once great ranching entity out of the agricultural industry entirely. Aggravating the effects of prolonged economic depression for all regional ranchers was a sustained drought that began in Nevada in 1928 and became especially severe by the 1930s. As early as 1929, the Dangberg Company began running its large artesian well pumps day and night to ensure adequate irrigation of the company fields. In that year, the Alpine Land and Reservoir Company released its stored water several weeks early to avoid the failure of the valley's second crop of alfalfa. With the 1929 stock market crash sending lending institutions under, farmers and ranchers that relied on credit for their agricultural operations and to weather bad years found their finances increasingly strained. Many Carson and Eagle Valley ranchers failed, or at least operated at a loss for much of the following decade. Mid-level operations such as the Stodiecks and Lampes ceased hiring seasonal laborers, instead calling on family members who had left the farming business, many of whom were out of work anyway, to fill the gap in labor. Many of the out-of-work laborers would later find employment in the federal labor camps established in Douglas and Ormsby Counties under President Franklin D. Roosevelt's various New Deal programs.[94]

For graziers in the region, the New Deal era became a more active extension of earlier Progressive Era programs and concepts, only with federal agencies filling the role that private investors and collaborative projects had taken on previously. Under Franklin Roosevelt's administration after 1933, the Grazing Service and Soil Conservation Service (SCS) both completed a significant amount of work in northwest Nevada, primarily with Civilian Conservation Corps labor based at two camps in Carson Valley, one at the Dressler Ranch called Camp Minden (DG/G-87 and SCS-6) near Gardnerville for Forest Service, Grazing Service, and Soil and Conservation Service projects, and one near Indian Creek Reservoir (BR-52) for the Bureau of Reclamation. These workers maintained or expanded irrigation programs, cleared truck roads, built fencing, constructed pipelines for the development of springs, and fought range and forest fires. Much of the fence work completed by CCC laborers involved establishing grazing district and allotment fencing on public lands as a result of the Taylor Grazing Act of 1934. Perhaps one of the most memorable and large-scale of the Minden camp's projects was the construction of a 1.5-mile rock drift fence along the crest of the northern Pine Nut Mountains near Wellington to control cattle movement. The SCS CCC workers focused on controlling soil erosion, including straightening sharp bends and stabilizing banks along the East Fork of the Carson River in Carson Valley. A major flood in 1937 contributed to the development of the Carson Valley Soil Conservation District under the management of the SCS. Led by Wilbur Stodieck, the local extension agent and member of the extensive Stodieck family that ranched south of Minden, the SCS established the district in 1939 with the hope of educating local ranchers about good soil conservation practices. The district, established under state law to allow ranchers to build a formal relationship with the SCS, was chaired by Fred Settelmeyer, with Wilbur Stodieck acting as secretary. The SCS did not provide funding or labor for projects, but provided technical expertise and educational programming about good flood control, water diversion, and erosion control practices to aid valley ranchers.[95]

1945 – Present – Diminishing Returns in an Urban State

Since the mid-1940s, the upper Carson area has experienced significant if moderate growth that shifted the nature of its built environment from largely agricultural to a mixture of agricultural land and suburban-style housing. Regional tourism in the mid-twentieth century focused at Lake Tahoe brought a growing number of travelers into the regional economy. In Carson Valley, the low housing costs and quiet atmosphere attracted many of the Lake's tourism workers who commuted to the basin via Kingsbury Grade. Douglas County further attracted state government employees, growing in number as Nevada's economy boomed beginning in the 1950s thanks to legalized gambling, a divorce trade, and copious defense spending, with Carson Valley

[94] Achard and Buedel, 193-200; Dangberg, 233-234; Glass, *Fred Settelmeyer*, 18.
[95] Maule, 62; Kolvet and Ford, 55, 57, 61, 66, 134.

representing a quieter and removed community. Between 1970 and 1980, the population of Carson Valley tripled, dramatically altering the character of the Valley, including the addition of some light industrial centers north of Minden. It also saw the sale of a great deal of agricultural land for suburban housing projects. These suburban projects, alongside commercial growth in the U.S. Highway 395 corridor, combined Minden and Gardnerville into a connected singular community by the early 1980s, albeit with concentrations of older commercial buildings in the former centers of each town.[96]

With the scale of successful farms and processing operations increasing after 1945, the demands and facilities of Carson and Eagle Valley farmers shifted in response. In 1946, the Minden Butter Manufacturing Company reorganized as a cooperative. Wilbur Stodieck, who had managed the plant since 1943, continued to operate as manager in 1947, when he accepted a position with the state. The cooperative opened an extension in Reno toward the end of the 1940s, switching the brand name to Windmill products. In 1950, the Minden plant expanded to include a milk bottling facility. In the first six months of 1951, the plant processed 221,000 gallons of milk and 35,000 gallons of cream. By this point, demand for dairy products was so great that the Minden plant was purchasing milk and cream from as far away from Fallon, Yerington, and Sacramento. By the early 1950s, the plant was processing all of the output of the Fallon Milk Producers Association, which closed its creamery in the area. In December of 1953, the Minden firm acquired the White Clover Dairy in Sparks. However, the success of the Minden facility was quickly eclipsed by a newer, modern facility near James Canyon north of Genoa in 1959, named James Canyon Ranch and operated by Beatrice Foods. In 1961, the Minden plant shut down, with nearly all of its business, and its laborers, moving to the James Canyon facility. The Minden Butter Manufacturing Company was purchased by Bently Nevada, Inc. in 1969, and was listed in the National Register of Historic Places in 1987 as part of Frederic DeLongchamps' architectural body of work. Unfortunately, it was heavily remodeled in 2016, with only the brick façade remaining of the historic building.[97]

The decline in viability for small farms and ranches after the 1940s transformed both the public and private landscape of agriculture along the upper Carson River. After the death of William Dressler in 1946, the Dressler family, under the leadership of Frederick Hugh Dressler, began to downsize the ranch in response to growing inheritance and property tax rates. Fred Dressler maintained prominence in the ranching industry, most notably serving as president of the National Cattlemen's Association. Still reeling from their debt incurred during the Great Depression, the Dangberg family continued to operate their ranch, albeit selling off land periodically and eventually liquidating the last of their properties, the Home Ranch, in 1978. With less demand for grazing on public land, federal agencies also shifted their management practices. The U.S. Forest Service office for the Mono National Forest had already been moved from Minden to Reno in 1939, but the agency maintained a ranger's headquarters in Minden for the Alpine District of the Mono, and later Toiyabe, National Forest. However, in 1973 the Forest Service dissolved the Alpine District into the Bridgeport and Carson Ranger Districts, closing the office in Minden. During the 1970s, the towns of Gardnerville and Minden both expanded significantly and the new community of Gardnerville Ranchos developed, all consuming land that had formerly been used for farming.[98]

In Eagle Valley, ranching coexisted with increased residential and commercial development pushing outward from the town's center along Carson Street. In 1947, Pete and Raymond Borda purchased a section of land at the mouth of Kings Canyon formerly owned by Benjamin King and began to use it as a sheep camp and

[96] Douglas County Planning Department, 6, 55; Hulse, *The Silver State*, 320.
[97] Dangberg, *Carson Valley*, 113.
[98] Wynne M. Maule, *Minden, Nevada: The Story of a Unique Town, 1906-1992*, (Minden, Nev.: Wynne M. Maule, 1993), 61; Walton-Buchanan, 38-40.

summer pasture. They wintered their livestock in Dayton, but operated the Kings Canyon property until 1996 when they sold it to the U.S. Forest Service for preservation as open space. Two Farm/Ranch Complexes collectively known as Silver Saddle Ranch, formerly the Bird-Ulrich and Chartz-Herlax ranches, saw a similar transition, as the owner donated the lands to the Bureau of Land Management in the 1990s, with the BLM transferring the property to Carson City in 2012 for use as municipal open space.[99]

Immigration, Ethnic Groups, and Gender in Carson and Eagle Valleys

The agricultural landscapes of both Carson and Eagle Valley reflect history and cultural influences from a number of ethnic and gender-specific factors. Despite the relative isolation of Nevada due to aridity and mountain ranges, the state attracted an unusually high percentage of foreign-born settlers compared to other areas of the American West. Furthermore, cultural affinities and economic realities propelled a larger proportion of women into roles as business leaders, including as ranch operators. Both of these factors are worthy of note, as they are reflected in the ranching history of Carson and Eagle Valleys.

Nevada boasted a higher percentage of foreign-born residents than any other state or territory during the nineteenth century with nearly fifty-percent of Nevadans hailing from outside the nation's borders compared to 1870s national average of fourteen percent. Mostly drawn by the state's early mining discoveries, Nevada's immigrants hailed from five continents and over forty countries by the mid-1860s. Historian Wilbur Shepperson categorized these immigrants into three categories: itinerant laborers, lesser proprietors, and prosperous business people. While the vast majority of immigrants supplied skilled and unskilled labor in the mining and ranching industries, many became important local merchants, key business and development leaders, and prominent elected officials. Because of their removal from their nations of origin, Shepperson observes that Nevada's foreign-born residents adapted quickly to a drastically different, and sometimes hostile, environment. The various farmers and ranchers of Carson and Eagle Valleys created their own small enclaves in local communities, reflected in both architecture and farming practices. The region's early settlement by Mormons, although brief, left a strong impression on the farming landscape, especially among its earliest homesteads. The departure of most Mormon families by 1857 to Utah during conflicts with the federal government limited the long-term nature of that influence, but it also augmented already strong immigration trends as Mormon missionaries recruited new church members from European nations, especially Great Britain. In the wake of Mormon withdrawal from the eastern Sierra, many immigrant groups moved into the vacuum left by them. These new arrivals purchased farms and ranches and adapted their own traditions to what that first layer of Mormon agricultural practices. By the 1860s, many Mormon families returned, and along with them strong immigration chains via church conversion in England and northern Europe. However, they did not retain the same dominance on this particular landscape as other areas in the Great Basin such as Utah and southern Idaho. Perhaps most indicative of the trend towards immigrant-based enclaves was the German community of Carson Valley, which maintained German traditions well into the twentieth century and became some of the most successful ranchers in the region. The key cultural influences of various ethnic and gender groups has been outlined below, where sufficient source material has allowed for a brief synopsis.[100]

Women

The history of women in ranching in Nevada is an understudied topic. Although the role of women on the domestic front during the mid-nineteenth through the mid-twentieth centuries is generally known and included in social histories of ranching throughout the United States, very little scholarship has been published on women who owned and operated ranches. Certainly, women were a critical part of any ranch's labor force. A

[99] Moreno, 82.
[100] Wilbur S. Shepperson, *Restless Strangers: Nevada's Immigrants and Their Interpreters*, (Reno: University of Nevada Press, 1970), 2-7, 27.

rancher's wife was typically the head of household, managing the day-to-day operations of the main ranch house, and preparing and supplying food to the working hands, whether family or hired help. Women usually also managed the poultry and gardens on any particular ranch stead, providing fresh produce as well as supplemental income to the household. In cases where husbands had died, were working elsewhere, or had abandoned their family, women often stepped into the role of business leader for their family ranch.[101]

However, the primary sources related to ranch ownership and management indicate that a small but significant percentage of ranches, at least in Douglas and Ormsby Counties, were owned directly by women, although the level of involvement in ranch operations remains to be established by future scholarship. Of the 412 land grants issued in Douglas County by the Carson City Land Office between 1862 and 1940, the office granted 62 of them in whole or in part to 54 individual women, equaling approximately 15% of all land grants issued during that period. In Ormsby County to the north, of the 128 land grants issued in the same period, 17 were issued in whole or in part to ten different women, an approximate total of 13.3% of all land grants during that time. These numbers suggest that, despite established norms regarding the division of household responsibilities, labor, and property ownership during the Victorian and Progressive eras, a significant minority of ranches were owned and operated by women. The land grants suggest that in most cases, these women owned their ranches outright, although in some cases, their name appears alongside that of man with the same surname, suggesting that they were a married couple that shared a legal stake in the operation of the ranch. It is also possible that some of these land claims were made to enhance family-owned acreage in the valley, with land transfers to a male head of household soon after purchase from the federal government. Anecdotally, an Elizabeth Kirman appears to have amassed a sizeable ranch at the north end of Carson Valley near the southern end of Jack's Valley by 1899, controlling most of the access to that portion of the Carson River. That ranch appears to have been sold off by 1913 to C.L. and Clara Fulstone and to Fred Cook. As another anecdote, it appears a Mrs. A. Helwinkel, who owned a 151-acre ranch straddling the Carson River in the 1920s, participated in the University of Nevada Agricultural Experiment Station program during that time, providing data to the extension about her operations and the cost of running her dairy farm. Further research is needed regarding this topic to further understand the role of women in the ranching landscape of the upper Carson River, Nevada, and the American West.[102]

Germans

Among the more indicative of Nevada's "prosperous businessmen" as identified by historian Wilbur Shepperson, above, were German immigrants to northwest Nevada. The majority of the context relating to Germans in Carson Valley is discussed in previous sections, so this subject will be treated only briefly here. Germans had been among the largest groups of immigrants to North America since the seventeenth century. By the nineteenth century, strong enclaves of German Americans had developed in Pennsylvania, Ohio, and New York, and continued to draw more immigrants from German states during the period. German immigration to the United States increased drastically in the mid-nineteenth century, pushed out of Prussia, Saxony, and Bavaria by political upheaval, and pulled to North America by economic opportunities. The western United States, and Nevada along with it, provided many of those opportunities in mining, farming, and ranching. German immigrants such as Heinreich F. Dangberg and Wilhelm Dressler strategically purchased property in

[101] Ruth B. Moynihan, Susan Armitage, and Christiane Fischer Dichamp, eds., *So Much to Be Done: Women Settlers on the Mining and Ranching Frontier*, (Lincoln: University of Nebraska Press, 1990), xi-xxii; In the oral history accounts related to Carson Valley ranching (see bibliography), regular mention is made of the contributions of women to the operation of ranches, specifically in operating the garden, preparing meals to the family and all staff on a given ranch, and conducting nearly all household businesses aside from crop or livestock production.

[102] Statistics compiled by the author from search results for both Douglas County and Carson City records of the General Land Office, https://glorecords.blm.gov/default.aspx, accessed March 2, 2017; W.W. Coleman, "Kirman Ranch, Carson Valley, Nevada," 1899; and Robert A. Allen, "Map of Carson Valley Lands," [1913], Robert A. Allen Papers, NC 97, and "Mrs. A. Helwinkel," 1929, Box 2 (maps), Fleischmann College of Agriculture – Agricultural Experiment Station Records, AC 0288, UNR.

Carson Valley and established businesses to profit off of the overland travel and mining economies in northwest Nevada. Their success, and their desire for reliable and familiar labor, led them to sponsor immigration from their kinship networks in Germany, creating a strong German enclave in Carson Valley that lasted well into the twentieth century. They also helped firmly establish German immigrants as the most successful of Nevada's foreign-born immigrant groups. Carson Valley's German enclave resisted Americanization in many ways until anti-German sentiment arose during the First and Second World Wars. As late as the 1910s, even native-born German American families continued to speak German at home, and supported German institutions in the region such as the Valhalla social club, the Lutheran Church, and German-language newspapers. The German immigrants to the region were joined by others from Germanic nations, including a sizeable cadre of Danish arrivals that established their own colony in Carson Valley. Many current farm owners in the area are fourth or fifth-generation German-American families descended from the various waves of German immigration to Carson Valley over the nineteenth and twentieth centuries. Names like Settelmeyer, Dangberg, Dressler, Stodieck, and Lampe still remain on the property ownership rolls for both Douglas and Carson counties.[103]

Italians

Although generally arriving later in the nineteenth and early twentieth centuries, Italian immigrants became an important immigrant group in the agricultural labor market of the Carson River watershed. As early as the 1860s, a small number of Italian merchants began supplying produce to the nearby markets in Carson City, Virginia City, and Dayton, acquiring parcels of farmland along the Carson River as they met with success. Italian farmers in the Pine Nut area Douglas County became well known for supplying poultry products to the region's markets. By 1900, Nevada had a disproportionately large percentage of Italian immigrants, with three percent of its population hailing from Italy, compared to two-tenths of a percent in the nation. In the early 1900s, Italians such as the Di Salvos, Bellis, Lompas, and Galeppis acquired ranches in both Carson and Eagle Valleys, often purchasing existing ranches abandoned by other ranchers after the national economic disasters of 1873 and 1893. Italian immigrants tended to value the acquisition of farmland due to the shortage of available land in Europe, and engaged in farming to a high degree in many areas of Nevada, including Truckee Meadows south of Reno, Paradise Valley north of Winnemucca, and rural areas of Lincoln County. Their immigration to Carson and Eagle Valleys appears to have been to a lesser degree, especially compared to the numbers of German and Danish immigrants to the area. As a result, their influence on architecture and the vernacular landscape of the area is not as pronounced. Nonetheless, Italians are worthy of note within this region due to their contributions to the produce markets of western Nevada, especially after Italian immigration to the United States began to drastically increase in the 1920s.[104]

Basques

Basque ranch workers proved to be a critical skilled workforce to the sheep-raising industry in the American West, including Carson and Eagle Valleys. Basque migration to the United States in the nineteenth century resulted from both economic incentives in the Americas and social, political, and economic pressures in the Basque Country controlled by that time by Spain and France. Spanish Basques had migrated to the American West beginning with Spanish colonization of the region in the seventeenth and eighteenth centuries. However, political persecution and military conflict in Europe during the nineteenth century compelled greater numbers to leave Spain and France for the Americas. Initially, Basques immigrated to former Spanish and Portuguese colonies in Central and South America. However, with gold and silver discoveries in the western United States in the 1850s and 1860s, Basques from Spain, France, and Latin America moved to places like northern California and Nevada. Records indicate that the majority of migrants to the western United States were

[103] Shepperson, *Restless Strangers*, 6-7, 33.
[104] Shepperson, *Restless Strangers*, 14, 110; Albin J. Cofone, "Themes in the Italian Settlement of Nevada," *Nevada Historical Quarterly*, 25, No. 2 (Summer 1982): 124.

secondary migrants from Latin America who had already garnered a reputation for sheepherding on the pampas of Uruguay and Argentina. The availability of public grazing land in the American West, the low cost of land for private use, and the markets provided by nearby mining towns provided a strong economic draw for new immigrant groups such as the Basques. Furthermore, many writers have observed that the environment of the Great Basin was rather similar to that of Euskal Herria of Basque Country.[105]

Completion of a transcontinental railroad network in the United States facilitated Basque travel to Nevada among other Great Basin destinations by the 1870s. Generally, Basques from the three French Basque provinces and Spanish Basque Navarre settled in California or southern and western Nevada, while those from Bizkaia (later called Viscayans) usually chose Idaho, eastern Oregon, and northern Nevada. Although gold and silver prospecting was the first draw for Basque immigrants, those who did not find wealth in the mining districts moved into the ranching industry, predominantly sheepherding which was a relatively accessible industry with a low opportunity cost, and that many had refined from time spent in Latin America. Their success in the western United States created a strong cultural association between Basques and sheep ranching in the region.[106]

The first Basques to arrive in northern Nevada came primarily to seek their fortunes in the gold and silver fields, with the initial intent to return home after accruing sufficient financial gains. However, like most prospectors, many found more lucrative and long-term employment in the ranching industry. Those Basque immigrants who achieved success in mining towns, either by prospecting themselves or opening related businesses, often settled into banking, cattle ranching, or other long-term industries. However, sheepherding became associated most closely with the Basques of the western United States, despite the fact that those who engaged in the practice were generally newcomers of modest means who relied on unregulated public rangelands for their success. They faced unique challenges that compelled many to permanently settle in the region. Among the more successful long-term ranchers were the Altube Brothers, who founded the famed Spanish Ranch in Elko County and operated it from 1871 to 1907. In Carson Valley, the first Basque rancher who eventually grazed his sheep in the region was Francisco Yparraguirre, who immigrated from Echalar, Spain to San Francisco in 1877 at the age of thirteen. Francisco first worked in San Francisco at his brother's hotel, the Yparraguirre, located on the southwest corner of Powell and Broadway. He later worked on the family's sheep operation in the San Joaquin Valley in Fresno. With impending drought, by 1887, Francisco and his brother Pablo purchased the Sweetwater Ranch in Lyon County, Nevada, consisting of over 2,300 acres where they ranched until 1942. Many other Basque individuals followed by the 1900s, either running sheep in the Carson Range or the Pinenut Mountains, or operating businesses such as the Eastfork Hotel or Terry Tavern in Gardnerville. Among those who lived in the area the longest were Jose and Josephine Incaby Sario, who arrived by the 1880s and settled in Gardnerville, running sheep at various operations throughout the region in Carson and Smith Valleys.[107]

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[105] William A. Douglass, "Basque Immigrants: Contrasting Patterns of Adaption in Argentina and the American West," in *Currents in Anthropology: Essays in Honor of Sol Tax*, edited by Robert Hinshaw, (New York: Mouton Publishers, 1979), pp294-95; Gloria Totoricagüena, *Basque Diaspora: Migration and Transnational Identity*, (Reno: Center for Basque Studies, University of Nevada, Reno, 2005), 10-15; Gloria P. Totoricagüena, *Identity, Culture, and Politics in the Basque Diaspora*, (Reno & Las Vegas: University of Nevada Press, 2004), 66.

[106] Totoricagüena, *Basque Diaspora*, 10-15, 203, 206; Totoricagüena, *Identity, Culture, and Politics*, 66; U.S. Department of the Interior, National Park Service, *Hispanic Reflections on the American Landscape: Identifying and Interpreting Hispanic Heritage*, by Brian D. Joyner (Washington, D.C., 2009), p 41; Howard Wight Marshall, *Paradise Valley, Nevada: The People and Buildings of an American Place*, (Tucson: University of Arizona Press, 1995), 9; William A. Douglass, *Global Vasconia: Essays on the Basque Diaspora*, (Reno: University of Nevada, Reno, Center for Basque Studies, 2006, 134.

[107] M.L. Miranda, *A History of Hispanics in Southern Nevada*, (Reno & Las Vegas: University of Nevada Press, 1997), 53; Moehring, 153; Clare O'Toole, "The Roots of Basque Character and the First Diaspora to the United States," *Who Are the Basques*, The Basques in Nevada, http://nevadabasque.com/who-are-the-basques/ (accessed June 2, 2015); Carmelo Urza, "The Age of Institutions: Basques in the U.S.," in *Community in the American West*, Stephen Tchude, ed., (Reno & Las Vegas: Nevada Humanities Committee, 1999),

Despite the notoriety of some Basque businessmen like the Altubes, Basque numbers in Nevada remained low through the late-nineteenth and early-twentieth centuries. This was in part due to a general anti-immigrant sentiment in the United States, but was aggravated by competition over public grazing land that fueled tensions between established ranchers and the new itinerant Basque sheepherders. While the recorded numbers of Basques in censuses in California, Nevada, Idaho, and Wyoming are difficult to trace, records suggest that prior to 1900, there were very few Basque residents in the region. Those who did move into the Great Basin were mining entrepreneurs, or participated in the sizeable exodus of sheep from the California ranges into the Great Basin in the late-nineteenth century. A resurgence in the wool market in the early 1900s compelled Basque sheep ranchers to expand their operations, and they called upon family ties remaining in the Basque Country to send more workers. Influenced by this trend, between 1900 and 1910, the number of officially recorded Basques in Nevada went from 180 to nearly a thousand just ten years later. Nevada's geographic location, its large grazing lands for sheep, and its position as a transportation crossroads between several regions of the American West, meant that it also became a cultural crossroads for the various Spanish and French Basques of the region. As Basque ranchers utilized the transportation networks to move their livestock, other Basque entrepreneurs established hotels, restaurants, and boarding houses along the same routes.[108]

Basque homes and businesses provided environments where Basques native to the United States as well as newly arrived immigrants could meet in familiar surroundings. The Basque boarding house, or *ostatua*, became one of the most endemic representations of this phenomenon in northern Nevada communities. Boarding houses not only were a familiar environment for communal gatherings, but also provided housing for new arrivals who were largely employed on a temporary basis. Established Basque sheep ranchers often hired newly arrived immigrants to handle sizeable herds numbering upwards of 2,000 animals. In the spring and summer months, these workers remained on the range with the herds as they foraged on upland and mountain grasslands. In winter, the herds were brought in to the permanent ranch where there was shelter and feed, and the workers would stay in boarding houses in the community. Many young Basque workers moved between jobs frequently, leading to a partially transitory lifestyle where workers might balance time between work in the United States and residence with their families in Basque Country. Some stayed in Nevada looking for more permanent employment in nearby cities, which they found with increasing frequency in the late-twentieth century.[109]

African Americans

African American migration to the western United States began in the mid-nineteenth century with small numbers of freedmen and their families moving to western states and territories. Kansas and California received the greatest numbers, in part, because they offered the greatest freedoms and opportunities. Other western states, especially those with a stronger anti-slavery culture, followed suit. Those that moved to Nevada tended to engage in the mining and merchant industries, although a small number went into ranching. The importance of mining to black economic opportunity in Nevada was clear in the movement for black male suffrage. As the push to ratify the Fifteenth Amendment began in earnest in the late-1860s, it was black men and women from

234; Nancy Hamlett, ed., *From the Basque County to the Sheep Camps of the Carson Valley: the Personal Stories of Basque Immigrants*, (Gardnerville, Nev.: Museum Committee, Mendiko Euskaldun Cluba, 2001), iv, 1-2, 5, 8.

[108] Totoricagüena, *Basque Diaspora*, 206-214, 249-250; O'Toole, "The Roots of Basque Character"; Jeronima Echeverria, "Expansion and Eclipse of the Basque Boarding House in the American West," *Nevada Historical Quarterly* 43, No. 2 (Summer 2000), 127, 129; Douglass, *Global Vasconia*, 136-137.

[109] Totoricagüena, *Basque Diaspora*, 206-219; Echeverria, "Expansion and Eclipse of the Basque Boarding House," 133-134.

the Comstock rather than Carson Valley that led the effort that ultimately made Nevada the first state to ratify the Amendment.[110]

The relatively small number of black ranchers and farmers in Nevada makes the contributions of Ben Palmer to ranching along the upper Carson River noteworthy. Considering the well-documented role of African Americans in supporting the southern cattle ranching industry, from South Carolina west to Texas, it is possible that Palmer had worked in cattle ranching as a slave before purchasing his freedom and moving west. A small number of black men, around 1600 individuals by 1890, either supported or owned ranching operations throughout the western territories and states. As mentioned previously, Ben was a freeman from Missouri and arrived in Carson Valley in 1853 and established a 320-acre ranch in what became known as the town of Sheridan, a small black community anchored by three early black and interracial families, the Palmers, Barbers, and Millers. It is believed Palmer and his sister, Clarissa Church, purchased their way out of slavery. Church married a white man named David (or D.H.) Barber, and the couple chose to settle just north of Palmer on a 400-acre ranch, raising their seven children. The small community of Sheridan that grew up around these three ranches became both a ranching hub and a way station for travelers, with Clarissa Barber becoming well known in the valley for her hospitality. These ranchers employed a combination of black, Indian, and white ranch hands and built some of the most successful operations in western Carson Valley. All three ranches are still present, although the three African American families that established them left by the early-twentieth century, selling their property to others in the valley. Palmer's ranch is now the Colyer Ranch, with most of the land now developed as part of southern Sheridan. The Barber ranch is similarly mostly developed, although the barn remains on the Scott Ranch. Perhaps best preserved is the former Miller ranch south of Sheridan, which was acquired by the renowned Scossa family and is still operated by them today. Although the overall narrative of African Americans in the ranching industry of the American West has received scholarly attention, research regarding their experience and contributions in the Great Basin, Nevada, and the upper Carson River demands additional research.[111]

Washoe and Paiute Indians

Perhaps one of the most important absences in the records and scholarship pertaining to ranching in this region is a generally limited consideration for the Washoe and Paiute. For the Washoe, Carson and Eagle Valleys were part of their ancestral homeland. The Paiute, eastern neighbors of the Washoe, were quite familiar with the region through trade networks and travel. Mormon and other Euro-American settlers largely ignored their claims to territory, in part, because they failed to recognize how the Washoe and Paiute associated with the land. Richard Allen, an early visitor to Carson Valley, documented how Washoe and Paiute tribal members adapted to the new economy imposed by the new arrivals. Many Washoe and Paiute opted into the farming and ranching economy as a new means of survival, either working on ranches, or, in a few rare cases, making their own land claims and ranching themselves. By the fall of 1857, Richard Allen noted that while the Washoe were considered hostile at the time, many of the local ranchers employed Paiutes as "rancheros" and spoke quite highly of them. References to Washoe and Paiute tribal members by ranchers such as the Dangbergs and Dresslers is frequent but passing, but usually mentioned the high quality of the work completed by Washoe and Paiute ranch hands. In a 1984 oral history interview, Fred Dressler, grandson of August Dressler, mentioned that the family regularly employed Washoe tribal members for piece work, including in the house, in the yard and garden, or in the fields. He also recalled playing with Washoe children during his youth, and of picking up elements of Washoe language in the process. Recordings by ethnographers, and the written documents and oral

[110] Quintard Taylor, *In Search of the Racial Frontier: African Americans in the American West, 1528-1990*, (New York: W.W. Norton & Co.), 104-105, 122.
[111] Taylor, 56, 156-157; Dangberg, *Carson Valley*, 3, 8, 40; *The Historical Nevada Magazine*, 82-83; Elliott, *History of Nevada*, 51, 116; Ed Johnson, "The First Black Rancher," *Nevada Magazine*, (January/February 1989), 27.

traditions of the Washoe Tribe of Nevada and California reinforce the narrative that the Washoe were an important labor force in the development of Washoe County's ranching landscape. Washoe ranch hands and household workers often lived in *dung-al*, homes that were usually made of canvas and boards provided by the ranch owner, or with willow branches from nearby rivers and streams.[112]

The Washoe memories, both personal and collective, are mixed. While ranching became an important source of income for many Washoe families in the decades following Euro-American colonization of northwest Nevada, their farm labor does not appear to have been consistently voluntary. Most Washoe families attempted to continue traditional practices to some degree after the 1860s, which meant leaving ranches during pine nut harvest season in the fall, leading to frustration from ranchers. Washoe recollections of the time period include requirements to carry work cards during the First World War, and the forced removal of Washoe children from their families to live with and work on area ranches under the Bureau of Indian Affairs' Outing System operated between 1878 and 1930. In 1938, 21 years after the creation of the Dresslerville Colony southeast of Gardnerville, the Washoe Tribe acquired the 400-acre Heidtman ranch and the 200-acre Faletti Ranch, and began using those properties as ranch land for tribal members. The complexities of the Washoe relationship to regional agriculture, as both an anathema and a benefit, deserve further research in order to provide a better appreciation of the significance of the Washoe and Paiute experiences in ranching after colonization of the region by Euro-Americans.[113]

Asian Americans

Also understudied is the role of Asian Americans in the development of agriculture on the Carson River in this area of Nevada. Immigrants from Asia, predominantly from China but also Japan and Korea, were a significant component of northern Nevada's labor force in the nineteenth century. However, primary sources and oral histories suggest that Asian immigrants were a relatively small component of agricultural labor in the area during the nineteenth and early twentieth centuries. Most Chinese laborers and their families worked in mining, timber-cutting, railroad construction, and service industries. They were a significant enclave in most western urban areas, with eighteen percent of Carson City's population being of Chinese descent by 1880, and the Chinese comprising 8.7 percent of Nevada's overall population. Considering the massive influx of Chinese immigrants to this portion of Nevada in the 1860s and 1870s, first to construct the Central Pacific Railroad, and later to work in mines, it is likely that they contributed to the ranching tradition in the valley as well. Ethno-histories and anecdotal accounts confirm that some Chinese immigrants owned farms and supplied produce to local towns, but as of the writing of this report, there are not known historic Chinese farms in Carson or Eagle Valleys. This may be due to the comparatively small number of Chinese living in Douglas County during the 1800s, which except for a high period in 1880, remained below 100 individuals. It also may be due to the minimal archaeological research conducted in Carson Valley regarding agricultural practices. As a result, the Chinese do not appear to have become a large percentage of the agricultural work force in Carson or Eagle Valleys. Many European farming families, including the Dangbergs, regularly employed a Chinese cook to serve ranch hands during busy work seasons. The Winters Ranch in Jacks Valley includes a barn that may have been constructed primarily with Chinese labor. However, noteworthy references exist. Genoa founder John Reese recruited roughly fifty Chinese men from San Francisco in 1855 to construct Rose's or Douglas Ditch, one of the earliest irrigation projects in Carson Valley. Their success as low-cost but industrious laborers

[112] Allen, October 9, 1857, Thompson, 3 and August 25, 1859, Thompson 79, and October 22, 1859, Thompson, 90, and December 27, 1859, Thompson 105-106; Dressler, 4, 16; "Reno-Sparks Indian Colony," undated report, provided by Darrel Cruz, Washoe Tribe of Nevada and California, March 22, 2017.
[113] Darrel Cruz, e-mail correspondence and research notes to the author, March 9. 2017; Robert A. Trennert, "From Carlisle to Phoenix: The Rise and Fall of the Indian Outing System, 1878-1930," *Pacific Historical Review* 52, No. 3 (Aug. 1983), 267-270, http://www.jstor.org/stable/3639003?origin=JSTOR-pdf&seq=1#page_scan_tab_contents.

convinced Mormon town officials to allow the Chinese to remain as placer miners and timber workers, as they often remained over the late-1800s in the region. As pressure among anti-Chinese factions mounted by the 1880s, many Chinese immigrants and their families returned to China, often pressured by violent attacks from other workers of other national backgrounds, including Irish, Scots, Basques, Japanese, Koreans, Filipinos, Hindus, and Mexicans, who considered the Chinese to be unfair labor competitors. Anti-Chinese legislation passed by Congress over the late-1800s and early 1900s aggravated this tension. By the 1900s, most remaining Chinese Americans were native-born, having little interest in moving to China where they had little direct connection, often setting up businesses in urban centers including Reno, Carson City, and Las Vegas. The strong presence of the Chinese, and emerging scholarship about the Chinese diaspora in the United States suggests that future research and archaeological discoveries may reveal more information about what role the Chinese may have played in Nevada's agricultural story.[114]

Also understudied, but also potentially significant, were the roles of Japanese and Korean immigrants in northwest Nevada agriculture. By the early 1900s, Japanese immigration to the United States had increased significantly, with Nevada, southern Idaho, and southeast Oregon becoming popular centers for settlement after the Pacific Coast. However, as the Japanese Empire grew in the 1910s through the 1930s due to military conquests in eastern Russia, China, and Korea, sentiments shifted against the Japanese in the western U.S. as Japan increasingly became a competitor for resources and trade access in the Pacific. Their success in moving beyond cheap labor into property ownership by the 1910s, especially in farming in the American West, prompted legislation by both the California and Nevada legislatures that restricted both Japanese and Chinese ownership of agricultural property and restricting lease terms. Despite the restrictions, many Japanese families worked on Nevada farms as wage laborers, and some management to retain ownership of their own farms, especially in southern Nevada. Both Korean and Japanese families also shifted into the merchant and business professional arenas of the state's urban centers. During World War II, although Japanese Americans in Nevada were not forced into internment camps, state and federal laws drastically restricted their freedom of movement and operation during the war. Like other areas of the west, they remained an important, if small, component of local business networks. Future research may identify significant Japanese or Korean contributions to agricultural history in Carson and Eagle Valleys.[115]

Barn Architecture in Carson and Eagle Valleys

Like agricultural landscapes throughout the United States, the design and workmanship of barns in Nevada lend themselves to the study of vernacular architecture. Architectural historians Thomas Hubka and John Michael Vlach have generally described American barn building into two phases, the first being the importation and distribution of European barn styles throughout the continent in the early colonial period, and the second being the adaptation of barn building techniques to the American environment. Barn construction in Carson and Eagle Valleys represents an extension of the latter trend, where ranchers, many of them foreign-born, adapted barn types to the environment of northwest Nevada, including its high winds, highly variable temperatures, and suitability for livestock raising over intensive farming. Barns often became the largest built structure on American farms, dwarfing even the larger ranch houses, and because of their variation, often provide clues as to the history and culture of the people that built them. Barn architecture in the Carson and Eagle Valleys is somewhat eclectic due to the influx of Euro-American and European immigrants in the mid-twentieth century.

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[114] Shepperson, *Restless Strangers*, 4, 117, 119; Department of Conservation and Natural Resources, Nevada State Historic Preservation Office. *State Preservation Plan*, "Chinese and Japanese," 1991, NVSHPO Context Files, Carson City, Nevada; Gregg Lee Carter, "Social Demography of the Chinese in Nevada: 1870-1880," *Nevada Historical Quarterly* 18, No. 2 (Summer 1975): 73-89; "Chinatown in Genoa," in *When Nevada Began: Bicentennial Issue*, (Reno: Dynographic Printing, 1976), 31; Sue Fawn Chung, "The Chinese Experience in Nevada: Success Despite Discrimination," *Nevada Public Affairs Review* 2 (1987): 43-51.
[115] Shepperson, *Restless Strangers*, 14, 131; DCNR, NVSHPO, "Chinese and Japanese."

Mormon settlers from the Utah brought with them the barn-building techniques from other places in the United States in the Mormon diaspora, including the American Midwest and Northeast, and Great Britain. The early arrival of the German immigrants such as the Dresslers and Dangbergs ensured a strong German influence in barn-building, as German arrivals called on family in Germany to send laborers to work on their farms, and often built barns with overtly German characteristics.[116]

Barn construction nation-wide in the late-nineteenth century increasingly utilized the products of the Industrial Revolution, namely standardized lumber and easy market access to railroads, to transform the structure and materials that went into barns. Plank-frame and balloon-frame structures made mortise-and-tenon joinery increasingly obsolete by the late-nineteenth century, although the frames themselves were weaker. These newer forms allowed for higher barns with larger lofts and unique rooflines while using less material than older log and stone constructions. Access to new, cheap materials such as manufactured glass, steel, concrete, and bricks helped reduce the cost but increase the strength and utility of barns, and the advent of agricultural schools in most states by the 1880s allowed for a more scientific approach to barn construction that could be implemented by rank-and-file farmers. The Sierra Nevada region, with Carson and Eagle Valleys included, appears to be an exception to these trends, utilizing heavy timber braced framing into the early twentieth century. It is possible that the combination of abnormally high winds, heavy snow, and isolation from reliable railroad connections until the twentieth century compelled area farmers to continue using braced framing until steel pole barns became the norm after the 1940s.[117]

The vernacular architecture of northwest Nevada's barns must be considered together with the settlement of the region by various ethnic and religious groups starting in the 1850s. The first Euro-American arrivals were Mormon, being drawn primarily from agricultural landscapes in the American Midwest, Northeast, and from England, Mormon barn-building traditions often displayed a mixture of various construction methods. However, much like elsewhere in North America, English techniques remained dominant throughout much of Mormon Country in the American West. The English-derived Mormon influence was brief in Carson Valley, with relatively few observed barns reflecting English or Mormon typology. Because Carson and Eagle Valleys drew a large number of German immigrants, especially from Westphalia and other parts of northern Germany, there is a strong German influence in the region. Most barns in the study area are either *three-bay*, *three portal*, or *transverse-crib barns*, with numerous variations of each type, although small numbers of other barn types have been observed. The *three-bay* barns usually suggest an English influence, while architectural historians Allen Noble and Richard Cleek have posited that both the *three-portal* and *transverse crib* barn types originated in northern Germany, and were often constructed by German-born immigrants in German enclaves of the western United States. As Carson Valley reflects one such enclave of German born immigrants, it is not surprising that German barn types dominate. Paul Oatman, a timber framer who has specialized in documenting barns in the Sierra Nevada, has observed the unique patterns of barn construction throughout the region. His observations have found that the fusion of new technology, older and ethnically-inspired building traditions, and the open, arid, environment, created what he has termed the "Sierra Nevada barn," which he argues is a unique adaptation of these various ethnic traditions to the Sierra Nevada Mountains. While architectural survey suggests that the uniqueness of these barns are not quite as pronounced as Oatman initially argued, his research and documentation in the area confirms a great variety of specific joinery and framing systems, such as different

[116] Paul F. Starrs, "The Barn Where it Belongs," in Stephen R. Davis, *Sagebrush Vernacular: Rural Architecture in Nevada*, (Reno: Nevada Humanities Committee, 2003), 22-23, 25; Paul Oatman, "Timber Frame Barns of Carson Valley," in Davis, *Sagebrush Vernacular*, 27; Dangberg, *Carson Valley*, 112; Chere Jiusto & Christine W. Brown, *Hand Raised: The Barns of Montana*, (Helena, Mont.: Montana Historical Society Press, 2011), 2, 7; R. Douglas Hurt, *American Farms: Exploring Their History*, (Malabar, Flor.: Krieger Publishing Company, 1996), 108-113.
[117] Jiusto & Brown, 7; Thomas Durant Visser, *Field Guide to New England Barns and Farm Buildings*, (Hanover: University Press of New England, 1997), 19.

combinations of bent types and scarf joints even if the overall design and layout of the barns reflects known trends in American barn-building.[118]

Although not as common as Germany types, English barns in the area likely reflect early Mormon settlement patterns, as the Mormon Church drew much of its membership in the mid-twentieth century from the United Kingdom. English barns typically included a three-bay design along a central aisle, and were constructed of braced timber framing using mortise-and-tenon pins. Traditional English barns had been exclusively for storing grain, but English colonists in North America quickly adapted this barn for multi-purpose use. The new barn, almost identical in exterior form to its antecedent, changed dramatically on its interior. On the ground floor, a central aisle was provided for pulling in wagons, or for threshing and winnowing grain, with side aisles being for storage of produce, hay, equipment, or working livestock (usually draft horses or milking cows). A hay loft was usually included on the upper level. Several variations emerged throughout the country, including a front-gabled version on a center aisle plan that emerged from eastern Tennessee, allowing for side aisles to house milking cribs and other facilities. Western states appear not to have any clear division in front-gabled or side gabled variations. Front-gabled barns in general appear more common in the study area, although very few follow the English three-bay barn configuration. In Carson Valley, Mormon influence included the copious use of hay forks to load hay lofts, regardless of the barn type. The Jackson Hay Fork was perhaps the most ubiquitous, being a simple cable system that ran along a track in the hay loft, including a doorway on the upper level to allow for ground-level loading from one or both of the barn's gable ends. Most barns, regardless of their typology, incorporated a hay fork of some variety during their operation.[119]

German-style barns vary from the English via several types, including the *transverse crib*, *three-portal*, and *bank barn* types common in German agricultural areas in Europe. The predominate German influence in the study area is from the heavy use of *transverse crib barns* and *three-portal barns*, both types believed to have been imported from northern Germany during large-scale German immigration to the United States in the early nineteenth century. These barns are similar, but retain nuances in floorplan. *Transverse crib barns* are defined by a single, large entrance on the front of the barn that provides access to all cribs via a large central aisle. *Three-portal barns* are very similar, but provide access to side-aisles via flanking entries on the front gable, providing exterior access to the side aisles rather than from the center aisle. Although these two types dominate the study area, *bank barns* appear to have also been imported by German barn-builders and ranchers to a small degree. Bank barns incorporate larger livestock space on a third, lower level and are often built into the side of a hill or bank, giving them their common name. They still tend to have a gable or gambrel roof, but are built into a hillside so that both the lower livestock level and the main threshing and winnowing floor can be accessed at grade with wagons. There remains a hayloft for storage in the upper level. In many cases, German-style barns in the United States are developments of German immigrants to Pennsylvania in the eighteenth and nineteenth centuries, which often incorporated other ethnic and American techniques. However, there are two varieties that appear rooted in barn types developed in Germany: the Grundsheier and Sweitzer varieties, both of which retain the three-level split in function, but the latter of which includes cantilevered hay lofts on the upper floors. German-style bank barns appear to be extremely rare in the study area, with only one surviving example known

[118] John Michael Vlach, *Barns*, (New York: W.W. Norton & Company, 2003), 305-308, 313-325; Jeff Kunz, "The Barn: Symbol of the Farmers Who Made the Mormon Landscape," in *Images of the West: Elements of the Mormon Landscape*, Richard H. Jackson, ed. (Provo: Brigham Young University, Geography Department, 1976), 34-46; Allen G. Noble and Richard K. Cleek, *The Old Barn Book: A Field Guide to North American Barns and Other Farm Structures*, (New Brunswick, New Jersey: Rutgers University Press, 1995), 72, 185, 199; Allen G. Noble, *Wood, Brick, and Stone: The North American Landscape, Vol. 2: Barns and Farm Structures*, (Amherst: University of Massachusetts Press, 1984), 11-13.
[119] Ohio HPO, 143; Jiusto & Brown, 3; Vlach, 17; Noble and Cleek, 27.

to exist, at Van Sickle Station south of Genoa. The Van Sickle barn is an example of a Grundsheier barn, identified by Noble and Cleek in 1995.[120]

Despite the frequent influence of Dutch-style barn-building in the American West, the influence from Holland appears to be slight in northwest Nevada despite the influx of Danish immigrants to Carson Valley in the 1800s. Further research into vernacular architecture in the region may modify this observation. Dutch barns in Holland tended to have entrances on the gable end, and retained a mortise-and-tenon framing system with documented use extending back to at least 1000 A.D. Most of the more recent iterations of Dutch barns retained the H-shaped anchor beam bents of earlier barns, were four bays long, and had their members assembled on the ground and lifted into place. However, American iterations of Dutch barns will usually have more horizontal wood siding as opposed to vertical siding or masonry construction, owing to the increased availability of old growth pine and other lumber in the United States compared to Europe. Most American versions of Dutch barns usually had the barn's frame resting on a sill or wall plate and used a masonry foundation or piers rather than driving posts into the ground. Barns in Carson and Eagle Valley frequently drove anchor beams into the soil to brace them against the heavy winds from the Sierra Nevada mountains. Lastly, American Dutch-style barns altered the traditional floorplan, placing the entrance of the building along the sides rather than on the front gable-end, perhaps influenced by the dominance of English techniques in American barn-building. No strictly Dutch barns were observed in the study area, but certain influences from Dutch techniques, and the documented presence of Dutch farmers in Carson Valley, make the acknowledgement of this particular ethnic tradition worthwhile. Several variations in Carson Valley bear resemblance to Dutch-style barns found in the Hudson River Valley of New York and in southwest Michigan.[121]

Local farmers and ranchers never used terms like "English," "German,", "Dutch," or Paul Oatman's term "Sierra Nevada" to describe their barns. For that reason, those classifications have not been used in favor of the various types outlined above. Since 1940, as agricultural production became more industrialized, the use and function of barns on larger ranches became different, and sometimes obsolete. Hay was no longer stored loosely, but baled, and in the large ranching environments of northern Nevada, baled into square or round bales in excess of 1,000 pounds, requiring larger barns. In many cases, farmers and ranchers added modern open-walled steel structures, often called pole barns, to shelter hay and ensure it remained ventilated. Furthermore, with work animals largely replaced by tractors, and with tractors and other equipment of a size that can no longer fit in most pre-1940 barns, the barn is frequently a marginalized building in modern farm and ranch settings.[122]

Barn Construction in Carson and Eagle Valleys[123]

The availability and proximity of large, high-value timber stands through the Sierra and the Tahoe Basin, as well as the lack of efficient railroad connections into the region prior to the 1900s, meant that heavy timber braced framing remained a popular barn construction method in Carson and Eagle Valley into the early twentieth century. As outlined above, the form and function of these barns is consistent with other barns in the American West. However, they exhibit what appear to be unique structural characteristics in their heavy timber

[120] Ohio HPO, 144; Paul Oatman, "Timber-Framed Barns of Carson Valley," *Timber Framing: The Journal of the Timber Framers Guild*, 56 (June 2000), 7; Vlach, 17-18; Noble and Cleek, 88-91.
[121] Theodore H. M. Prudon, "The Dutch Barn in America: Survival of a Medieval Structural Frame," in *Common Places: Readings in American Vernacular Architecture*, Dell Upton and John Michael Vlach, eds., (Athens: University of Georgia Press, 1986), 204-218; Vlach, 18; Noble and Cleek, 107-110.
[122] Starrs, "The Barn Where It Belongs," 23.
[123] As the best, and frequently only, published resource on Sierra Nevada barn framing and architectural history at the time of this form's drafting, much of the material below has been adapted from the various publications of Paul Oatman, timber framer and builder from Pioneer, California.

framing and mortis-and-tenon joinery. Many of the surviving barns were constructed after the mid-1890s in response to a growing popularity of Carson Valley dairy products. The barns provided hay storage and shelter for dairy animals, as well as equipment storage and milking space. However, barns on some of the older ranches in Eagle, Carson, and Jack's Valleys date as early as the 1850s and 1860s. Like many barns in North America, the barns in Carson and Eagle Valleys exhibit blended construction techniques that are predominantly English in origin, but with influences from Germany and Holland..[124]

Oatman has observed that almost invariably, timber frame barns along the Sierra Nevada used the square rule method of framing and frequently resulted in barns with central and side aisles, despite the variations in joinery. The square rule method involved keeping posts and beams at common lengths, at least specific to each individual barn, allowing parts of a particular barn to be interchangeable. Many, especially the larger Transverse Crib Barns, include dropped tie beams, a tie beam which is below the top plate, meant to keep the tenons within the walls and roof of the barn and prevent contact between the elements and the barn's framing system. Earlier barns that predate the introduction of the various hay fork patents in the mid-to-late 1860s will typically have a transverse driveway opening on the eave side of a barn and 30 to 40-foot-wide aisles for pulling large wagons through the middle of a barn to load or unload hay. As a result, these barns tended to be larger, and frequently required additional posts between the purlin posts to support a spanning tie beam. Barns with these features generally date prior to 1870. The earlier barns also tended to be made of hand-hewn Ponderosa Pine (*Pinus ponderosa*) members, likely harvested from the properties that established them. After that time, most barns had a smaller entry on the gable end, meant for storing equipment rather than loading and unloading hay, and will have some form of hay fork on one or both gable ends, with a pulley system on the interior, allowing for expedient loading of haylofts with grass cuttings or alfalfa. Some earlier barns may have been modified to accommodate a trolley by cutting the tie beam from its tenons and lowering it to allow for the trolley.[125]

Barns built after 1870 tended to have the hay fork paired with the main door on a gable-end, and will have braces running cross sills to posts, allowing bracing in three directions and providing more stability to the barn. Because of the proliferation of a well-organized lumber industry by the 1870s, milled lumber from farther upstream was easier for carpenters to obtain, resulting in a shift in later barns toward frames of sawn Douglas Fir. Because of the high winds in the Sierra, strong bracing was critical, frequently compelling the farmers in region to construct their barn frames with sill-to-plate braces in lieu of knee braces, sometimes referred to as a Continental bracing style. However, it appears this bracing style is conspicuously absent in Carson Valley, only seen along the eastern Sierra farther to the north. The newer barns tended not to have large doors on the gable-end, instead having smaller entries on the side aisles for livestock, and the opening for the hay fork in the gable end. The Scossa Barn along Foothills Road south of Sheridan is a well-preserved example of this construction type. It was not until farmers purchased larger equipment and tractors that openings were cut into the barns to store the equipment in the center aisle. Frequently, these will be modifications made to a barn in the 1920s through the 1940s. The new design also added square footage, and saved on the labor and materials no longer needed to build driveways into barns.[126]

Oatman describes further the character-defining features common to most barns in the region:

[124] Paul Oatman, "Sierra Nevada Barn Evolution," *Timber Framing: The Journal of the Timber Framers Guild* 102 (December 2011): 8.
[125] Oatman, "Timber Frame Barns of Carson Valley," 27; Oatman, "Sierra Nevada Barn Evolution," 8, 12; Paul Oatman, "Sierra Nevada Barn Evolution II," *Timber Framing: The Journal of the Timber Framers Guild* 103 (March 2012), 10; Oatman, "Timber-Framed Barns of Carson Valley," 7.
[126] Oatman, "Timber Frame Barns of Carson Valley," 27; Oatman, "Sierra Nevada Barn Evolution," 8, 12; Paul Oatman, "Sierra Nevada Barn Evolution II," 10: Oatman, "Timber-Framed Barns of Carson Valley," 7; Paul Oatman, "Timber Frames of Nevada and California," *Timber Framing: The Journal of the Timber Framers Guild* 81 (September 2006), 21 .

> All the frames are fastened with softwood pins, and foot braces on posts are common, no doubt a necessity to deal with high winds, as in a "Washoe Zephyr." Posts lacking foot bracing have 6 inch tenons, usually double pinned to the 12 by 12 ground plate or groundsill. Only two roof shapes were used. One is a gable roof, usually at a 9 in 12 pitch, and the other is a gable roof over the central aisle with side aisles having shed roofs, or, more poetically, "wings." The majority of barns have a central aisle for hay and side aisles for livestock. Some larger barns, like the Van Sickle barn outside Genoa, have principal purlin posts to support the 32 foot span of the central aisle. The central aisle had no door since hay was loaded with the Jackson Hayfork from the opening at the top of the gable. Openings were later cut in the walls for tractors. Some barns had a side entry in to the central bay through which the hay wagon could drive. The Dressler barn in the Carson Valley is a fine example of a side entry barn.[127]

Some of the earlier barns in Carson Valley constructed by Mormon settlers and their counterparts tend to have long purlins and eave plates, both of which were hand hewn. Some of these purlins and eave plates measured up to 60 feet long with only one scarf joint along their entire length, indicating the quality and height of available lumber from surrounding forests at the time. With the exception of the Van Sickle barn north of Mottsville which has wooden pin fasteners, all scarf joints in valley barns are held together with steel bolts, with the bottom scarf indicating the side of the barn that was constructed first. However, Oatman observed that the region possesses a remarkable plethora of scarf joints in larger barns, indicating a diversity of barn builders and barn building techniques.[128]

Oatman further describes the typical construction method of these barns, specifically those with center aisles:

> The ground sills were laid first and were usually 12 by 12 inch timbers, the largest in the frame and in most cases hand hewn even after 1900. These large timbers were needed to support the frame and rested on piers of rock. Next, the central aisle was assembled in a series of "bents" or sections. The purlin or aisle posts and braces were put into place, then the dropped tie beam was added. Each bent was raised, connected with interties and a purlin plate was fitted on top of the bents. The outer side aisle walls were built as one "wall bent" and connected to the main frame with secondary tie beams. A common rafter roof system was built last and united the structure. Finally, all frames were "draw bored." Pinholes in the mortise were laid out approximately 1 and ½ to 2 inches from the edge of the timber where a 1 inch hole was bored. The tenon is laid out the same but set back 1/8th to 3/16th of an inch closer to the shoulder of the tenon so that the joint is pulled tight when the pin is driven in. This is also why all the pins are pointed.[129]

Observations by Oatman and others document the typical incorporation of Dutch, German and English techniques in most of the valley barns, although typical of American barn construction, English techniques dominate. Rare to see incorporated into Carson and Eagle Valley barns are Dutch stylings, which involved placing the main entrance on one of the broad gable ends and having low eaves along the long sides. Variations of Dutch barns along the Sierra tend to have tapered rafters. In most observed cases, regional barns adopted the English design of placing entrances on both long sides, permitting wagons to enter and exit without turning around. Late-nineteenth century upper Bavarian-influenced barns often had a first level built out of stone, the upper sections built of wood frame with weatherboarding, and had sliding doors to replace hinged doors. The lower floor might contain a threshing floor, horse and cattle stalls, and a storage room, while the second level would house a granary if there was one and space for hay storage. There might also be a hayloft above. Frequently, barns would have their wood shingle roofs replaced with corrugated metal prior to 1900. In the

[127] Oatman, "Timber Frame Barns of Carson Valley," 28.
[128] Oatman, "Timber Frame Barns of Carson Valley," 28; Oatman, "Sierra Nevada Barn Evolution," 8.
[129] Oatman, "Timber Frame Barns of Carson Valley," 28.

early twentieth century, as Carson and Eagle Valley ranches turned to dairy farming to a higher degree, many barns were retrofitted with milking equipment and separators. In present research, there does not appear to be a correlation between the ethnicity of the ranch owner/operator and the type of barn constructed on the ranches. In this region, the English manner of dual-side entry barns appears to have dominated, although it was not uncommon for entries to be put on gable-ends as opposed to the sides, as is the case with barns such as the Wilhelm Lampe barn and the Louis Stoedick barn in Waterloo.[130]

Other vernacular varieties of barns appear to have been used to a small degree in the region as well. The Winters/Schneider Ranch in Jack's Valley has three timber frame barns, one of which is one of the only examples of a dog trot (also called double pen and drive) barn in the region. The Schneider dog trot barn has hand hewn logs, one of which is sixty-seven feet long and uses squared logs that are stacked and notched at the ends.[131]

In addition to their engineering and design, the location of barns within the overall Farm/Ranch Complex appears fairly consistent. With most surviving barns being from the late-nineteenth and early-twentieth centuries, they reflect a capital improvement often made after the initial establishment of a land claim and a Farm/Ranch Complex. In most observed cases, the barn rests outside but adjacent to the main cluster of buildings on a Farm/Ranch Complex and has attached corral space, especially if livestock shelter was a primary function of the building. The ranch house is often the center of the complex, with several ancillary buildings such as storehouses and garages immediately surrounding it. The main barn, or barns, usually rest just outside this initial ring of buildings and structures, close enough to be accessed quickly, but far enough away to keep the smells of livestock, and the risk of fire, removed from the main house. The sheltering of riding horses or wagons and horse teams also made some proximity of the barn to the main house important for the ranching family.

Barn building techniques appear to have remained fairly static throughout the 20th century until the 1940s. Beginning in that decade, American farmers and ranchers began to prefer the more durable and easier to maintain steel frame barns with corrugated steel siding. Perhaps because of the extra durability of the older, timber-framed barns, it appears that not many farmers constructed corrugated steel barns or outbuildings, although some use of these materials appears on some ranchers, such as former Dangberg properties, and ranches run by the Settelmeyers among other families. More common was the addition or replacement of older timber-frame barns with steel-frame "pole barns." Pole barns were typically steel roof structures with no walls, and simple steel posts running into concrete footings in the ground, often with no foundation. These structures proved both durable and cheap, and provided an easier shelter under which to stack hay bales. Beginning in the 1960s, these simple steel pole barns became the dominant form of barn construction on working ranches. However, a much smaller number of new barns constructed on horse ranches incorporated a stripped "rustic" style or enclosed corrugated steel, appealing to recreational ranching that emphasized pleasure equestrian riding rather than the area's historical foundations as a food production center.

Barn Builders

Not much is known of those who constructed barns in Carson and Eagle Valleys but clues to the individuals involved, their backgrounds and skills, and their prominence in the regional economy can be found in contemporary sources. The 1881 *History of the State of Nevada* list 118 carpenters' shops in that year in the State of Nevada alone, second in number only to teamsters, the vital supply lifeline for the region's mining and

[130] Carole Rifkind, *A Field Guide to American Architecture*, (New York: A Plume Book-New American Library, 1980), 248, 272-273; Davis, *Sagebrush Vernacular*, 42.
[131] Oatman, "Timber Frame Barns of Carson Valley," 29.

farming communities. Carpenters generally received a higher wage of around $7 a day, compared to $4 a day for miners.[132]

The Gansberg barn along Foothill Road outside Genoa appears to have been built in 1910 by a master carpenter named William Thran, with the beams hewn by Henry Arnett, a member of the Washoe Tribe. Gansberg's other barn, which was saw-milled, was constructed in 1914 by Henry Manke. The dogtrot Schneider barn in Jack's Valley mentioned above was possibly built by Chinese laborers as early as 1850, although this has not been confirmed.[133]

[132] Oatman, "Sierra Nevada Barn Evolution," 8
[133] Oatman, "Timber Frame Barns of Carson Valley," 29.

F. Associated Property Types

The property types included in this document for agricultural resources along the upper Carson River in Carson and Douglas counties include the types of resources that are most likely to be eligible for the National Register of Historic Places (NRHP). Agricultural production creates a built environment including buildings, structures, objects, sites, and districts. The property types outlined below are the most likely units by which resources associated with agricultural activities in this region between the 1850s and the 1970s can be nominated to the National Register. Although there has been a great deal of research and published work about agriculture in this area, very little of that research has been focused on the eligibility of associated resources for the National Register of Historic Places, nor has any formal survey of farms and ranches in the region been undertaken prior to this report. Agricultural survey for NRHP eligibility in Nevada is generally limited, with the bulk of research being individual ranch evaluations in advance of federal undertakings such as highway or mining projects. The only regional surveys currently on file are for Mason Valley in Lyon County, and western Washoe Valley in Washoe County, both completed in the 1980s. The primary framework for property types under this context has been taken from the 2008 Multiple Property Documentation Form *Agricultural Resources of Boulder County*, Boulder County, Colorado (NRIS# 64500987). As mentioned above, the selected property types indicate what resources would be eligible for the National Register individually. The Farm/Ranch Complex property type has received the most attention, as based on field survey and research, most resources will be eligible as components of a larger site or district. Since survey for this effort was primarily windshield and reconnaissance-level documentation, refinements to the property types, or additions of new property types, especially as potential contributing elements to Farm/Ranch Complexes, may be warranted in the future.

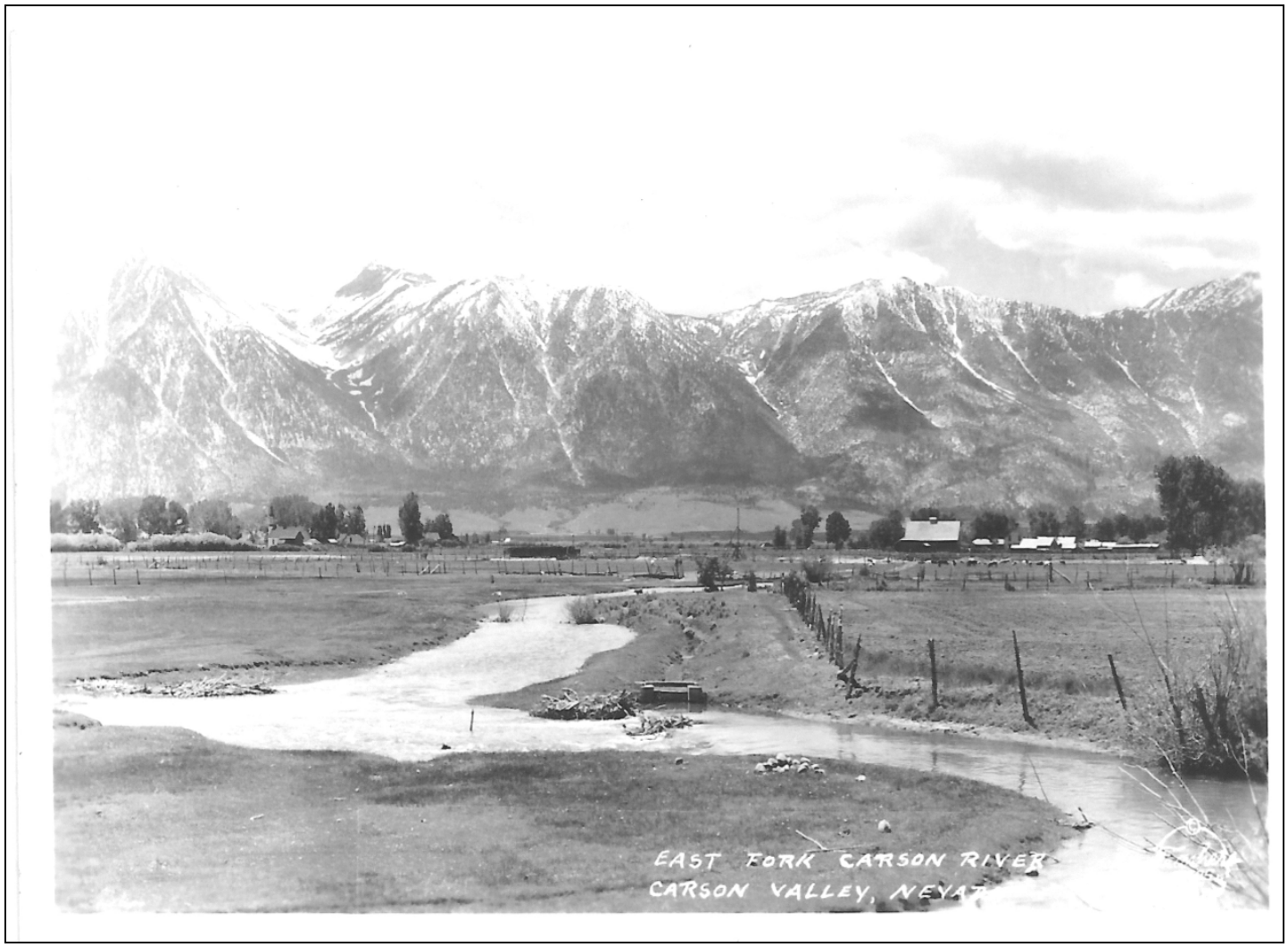
Because of the geographic development of Douglas County and Carson City over the twentieth century, many of these farm and ranch properties will be found in suburban or urban landscapes. This document considered the manufacturing and processing facilities associated with agriculture in both counties, since many of the key ranching personalities established horizontal integration of their processes, owning not only the land and livestock, but the mills and creameries as well, as is the case with the Dangberg Land & Livestock Company in Carson Valley. Although many of the ranches included in this multiple property documentation hosted small schools, schools have not been included in this document, and should be evaluated under the separate state-wide MPDF, *Schools in Nevada*. Furthermore, the social institutions, such as social halls and commercial resources, have not been included, as especially in Douglas County, these resources are nearly impossible to separate from related but separate contexts regarding community planning and development and commerce in communities like Carson City, Minden, Gardnerville, and Genoa.

Because of the nature of agricultural development in northwest Nevada, the primary unit of analysis and evaluation has been the combined Farm/Ranch Complex. Although there are many buildings, structures, objects, and sites that contribute to the operation of the ranch, few will be significant individually, except perhaps barns, ranch houses, and primary irrigation canals. Even in these cases, ranch houses and barns will almost invariably be contributing to the larger unit of crop or livestock production if they retain sufficient integrity. As a result, most agricultural resources should be evaluated as potential historic districts under the "Ranch Complex" property type. Some examples of property types may not be individually significant but might be contributing to a larger concentration of resources related to agricultural resources in this area, meaning that many property types will have common attributes. This is especially true of areas of significance and registration requirements, and as such, those common items are discussed first.

Significance – General

Criterion A

All property types within this MPDF will be potentially significant under Criterion A in the area of *Agriculture* for their association with historic agricultural activities, including farming, ranching, and agricultural processing in the Carson River watersheds of Carson and Douglas counties in the nineteenth and twentieth centuries. Although diversification of agriculture occurred throughout the historical period outlined above, the dominant agricultural activities in the valley consisted of dairying and beef cattle production, sheep raising, poultry production, and hay cutting. Although other activities occurred, including fruit and vegetable growing, hog raising, and horse raising, none of these rose to the level of dominance that the cattle and hay industries did in Carson and Eagle Valleys. Subsequent commercial and residential growth in the area has infringed upon agricultural land and property, leading to the loss or damage of many significant properties among the following property types.



Historic image of the William Lampe Ranch looking west to the Carson Range of the Sierra Nevada Mountains. Hussman Company Ditch flows through the foreground. Photograph likely dates from 1932, as Burton Frasher, Sr., the photographer for Frasher's Foto Postcards, took similar pictures of Carson Valley in that year. Courtesy of Jacobs Family Berry Farm.

Agricultural resources nominated under this MPDF may also be significant under Criterion A in other areas, such as *Exploration/Settlement*, *Industry*, *Conservation*, *Ethnic Heritage* or *Transportation*. Many of these latter associations will generally need to be evaluated on an individual basis, although some of these are discussed in the individual property types. Properties significant to the early settlement of Carson and Eagle Valleys by the LDS Church among others may be nominated under *Exploration/Settlement*. Properties that became important in the buying, selling, and trading of goods, such as a dairy, poultry factory, mill, or supply station might be nominated under *Commerce* and/or *Industry*. Properties such as a drift fence built by CCC workers in the 1930s might be nominated under *Conservation*. A property such as a ranch complex or house associated with important African American or Basque ranchers in Carson or Eagle Valleys might be significant under *Ethnic Heritage*. The context above has revealed that the community of Sheridan in Carson Valley was initially settled by the Palmer, Barber, and Miller families, all African American or of mixed marriage. Resources remaining from their operations are likely to have significance in the area of Ethnic Heritage with state-level significance as a rare reflection of African American ranching in Nevada. A roadway or railroad-related property associated with transporting agricultural goods out of Carson and Eagle Valleys may be significant under *Transportation.* In general, areas of significance should be selected sparingly, and used only when the property in question can demonstrate and reflect clear *significance* within that area, not merely association.

The Dressler Ranch Complex along Dressler Lane. Nevada SHPO, July 7, 2016.

Criterion C

Many resources nominated under this MPDF may possess significance under Criterion C in the areas of *Architecture* or *Engineering*. In these areas, agricultural resources may be significant for the distinctive design, form, or construction characteristics that are associated with their use for agricultural production or processing. The residences associated with the farms or ranches may possess high artistic values or may be strong examples of typical types or styles of popular architecture of the period. The resources' craftsmanship, materials, construction methods and sometimes design plans are reflective of their historic function in agriculture, sometimes highly specialized. For example, a barn that reflects a unique adaptation of German and English barn-building styles and joinery, such as the Wilhelm Lampe Barn south of Gardnerville, might be significant under Criterion C in the area of *Architecture*. A Farm/Ranch Complex built by a prominent rancher or ranching company that provided a master-planned community for ranch hands and their families, such as the Buckeye Ranch built by the Dangberg Land & Livestock Company, might be nominated under Criterion C. An irrigation canal that introduced a particular type or design of such a canal to Carson Valley might be nominated under Criterion C in the area of *Engineering* for its reflection of important irrigation engineering developments in the region.

The Williams Ranch House in south Genoa off Foothill Road / State Highway 206, a strong example of Gothic Revival architecture. NVSHPO, July 7, 2016.

Criterion B

The majority of agricultural resources that are eligible for the National Register will be eligible under Criteria A and/or C. However, resources may be eligible under Criterion B for their association with significant individuals as well. The prominence of Carson and Eagle Valleys in Nevada's agricultural development, and the location of the capital city within the region, meant that many farmers and ranchers rose to prominence as economic leaders, political leaders, or both. For example, several individuals within the Dangberg and Dressler families not only developed some of the largest agricultural and industrial operations in Carson Valley, but served in the state legislature representing the region's agricultural interests, having significant influence over the state's early agricultural policies. They frequently helped develop the irrigation companies such as the Alpine Land and Water Company that provided critical water supplies to the region's farmers and ranchers. As a result, properties associated with the significance of these individuals, such as the Dangberg Home Ranch (NRIS# 80002466), the Dressler Ranch on Dressler Lane west of State Highway 88, and the Settelmeyer Ranch on Genoa Lane west of U.S. Highway 395 may be eligible under Criterion B in the areas of *Agriculture* or *Commerce* among others, if they have sufficient integrity.

The Dangberg Home Ranch, showing the main ranch house (left), and several ancillary buildings. The ranch was listed in the National Register of Historic Places in 1980. NVSHPO, July 7, 2016.

It is important that any property evaluated or nominated under Criterion B not only be associated with a prominent individual, but that the property played a key role in that person's significance to local, state, or national history. Since many of Carson and Eagle Valley's most prominent individuals were prominent, in part, due to their success and influence in the state's agricultural network, primary Farm/Ranch Complexes or ranch

houses may be good indicators of this significance. Mere association with, or temporary ownership by, a significant individual is not sufficient to demonstrate eligibility of a property for the National Register. These properties should possess clear integrity to the time period during which the significant individual owned, operated, and/or conducted their business at the property.

Criterion D

Some properties may be eligible under Criterion D for their potential to yield future information to the study of agriculture along the upper Carson River. That information potential is not limited to sub-surface archaeological features or sites. Criterion D significance may relate to buildings or structures in rare cases where the built resource is principal resource for future information, such as a unique construction method that illuminates an important aspect of architectural history in the study area. As an example, the site of a farm labor camp or African American homestead that has been completely razed, but its archaeological features remain and can shed light on the contributions of these groups or individuals to local or state history, would be eligible under Criterion D in the area of *Agriculture*, *Archaeology-Historic*, and *Ethnic Heritage*.

It is important to note that most ranching properties will have some degree of archaeological resources within their boundaries, such as a trash midden or former privy site, but many may not be significant for their information potential, and thus not significant under Criterion D. In many cases, archaeological resources related to ranching will be contributing resources to a larger historic district under Criterion A or B. To be eligible under Criterion D, an archaeological site, building, or structure should be able to address clear gaps in the existing research or understanding regarding agriculture in the Carson and/or Eagle Valleys. At present, those gaps include, but are not limited to:

- An understanding of the valley's ethnic history related to agriculture, including the Washoe, Paiute, African Americans, Basque, and Chinese.
- Crop variability and rotations on family/subsistence farms in the region.
- Early settlement of agricultural space and common farming practices in the early periods (1850s-1870s).
- Peripheral agricultural practices on the commons (i.e., field camps and travel corridors for livestock on land not owned by the ranch owner/operator).

Although rare, some ranch properties may possess built resources that could yield important future information about agriculture in the area. For example, a barn or shed type that becomes important in dating that property type, construction expertise which affected the evolution of a local building technique, local availability of materials, use or ethnic associations, etc., may be eligible under Criterion D in the area of *Agriculture* or *Architecture*, or both. At present, there exist significant research gaps in the understanding of local vernacular architecture related to barn-building, and the relationship between ranch owners, barn-builders, and ethnic barn-building traditions. The ability of a specific barn to address this research gap and provide greater understanding of ethnic building traditions in the study area may allow a built resource to be eligible under Criterion D.

Period of Significance

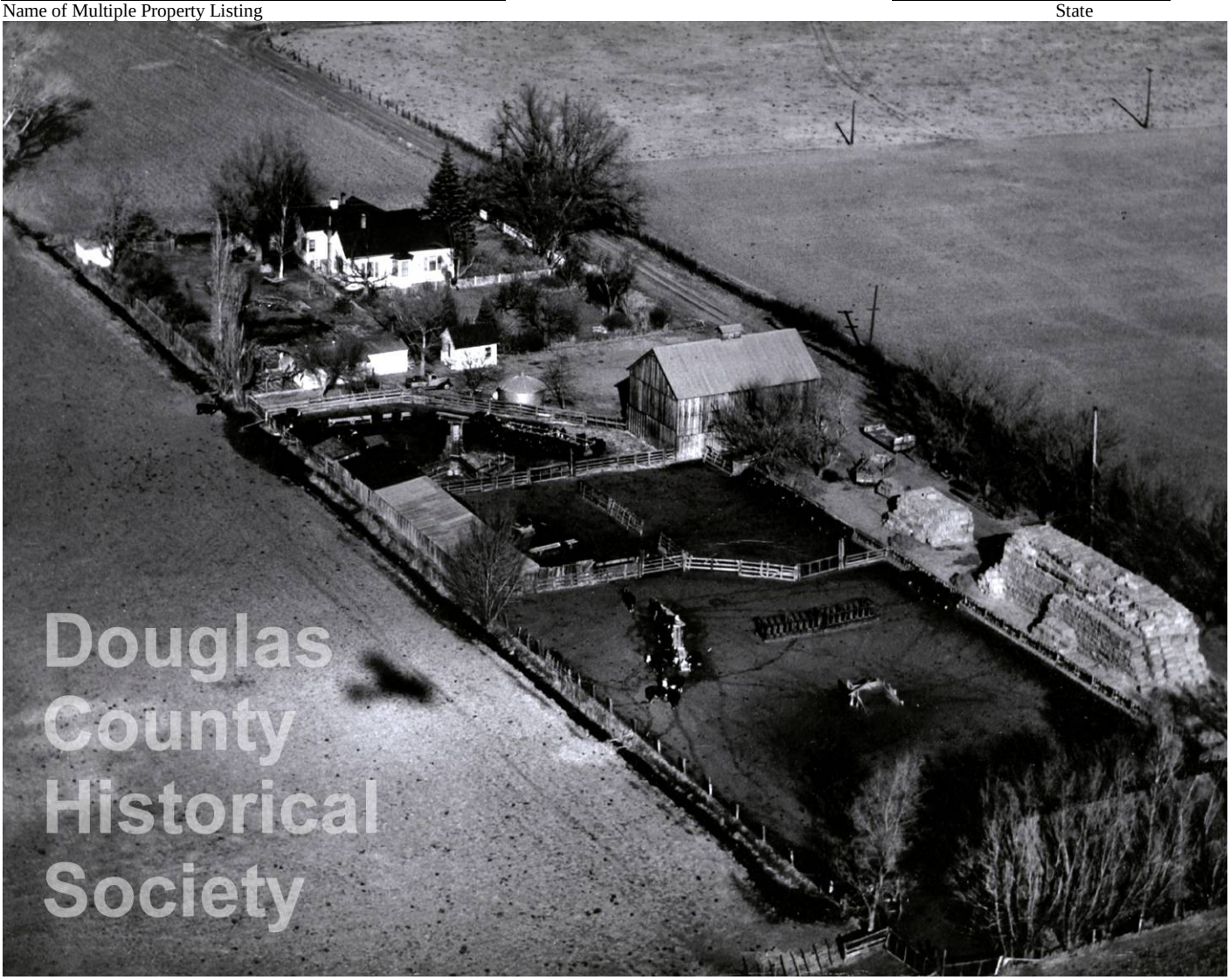
A period of significance for a particular agricultural property must be defined based on the individual circumstances, historic use, and significance of the place in question. Under Criterion A, the period of significance will be the period during which the individual resources or the Farm/Ranch Complex contributed significantly to the theme of agriculture within the Carson and Eagle Valleys. Under Criterion C, the period of significance will be the year or date of construction, and the date(s) of significant alterations with architectural importance, if applicable. Under Criterion B, it will be the period during which the important individual

occupied the property and made their contributions to local, state, or national history. Under Criterion D, like Criterion A, it will be the period of occupation or use related to agriculture in the area.

Since agriculture continues to be an important part of the economic development for certain areas covered in this MPDF, especially in Carson Valley, it is possible that historic districts will have continued use as agricultural sites more recently than fifty years, potentially up to the present. For resources within those districts, referred to as "Ranch Complexes" as a property type, to be considered *contributing resources* if they were built less than fifty years ago, the following conditions must be met:

1. The majority of resources in the district are over 50 years old.
2. The district's resources are clearly related to significant agricultural developments in Carson and Eagle Valleys.
3. The district's period of significance, both beginning and end, are clearly justified within the historic developments of this MPDF and the property being nominated/evaluated.
4. The resources within the district date from the justified period of significance and are associated with the district's area of significance.

For example, a Farm/Ranch Complex with demonstrated significance in *Agriculture* in Carson Valley and primarily developed in the 1910s, but which experienced alteration in the late-1970s in response to a shift to poultry production, may be able to classify additions to the landscape as compatible, and thus not adversely affecting the integrity of the property. However, if the majority of resources within a Farm/Ranch Complex are less than 50 years old, than the nominated district would need to meet Criteria Consideration G.



Louis Stodieck Ranch, c.1940s, looking northeast. Courtesy of the Douglas County Historical Society.

Associated Property Type: Farm/Ranch Complex

The term "ranch" emerges from the Castilian Spanish word *rancho,* which only garnered its association with places of livestock-raising in Spanish colonial Mexico. Geographer Paul F. Starrs defines a "home ranch" as the fundamental unit of livestock operation in the western United States. While the home ranch includes a multitude of pieces and parts, Starrs identifies the ranch as a foundation for ranching culture, being the economic and social hub of ranching operations, especially since the passage of the Taylor Grazing Act of 1934. Ranch steads were a necessity of ranching operations, borne out of competition with homesteaders by the 1870s, severe winters in the 1870s and 1880s that required a different conception of winter livestock management, and the increasing enclosure of the western rangelands by the end of the nineteenth century. Although varying in size from small family operations to large company complexes, Farm/Ranch Complexes throughout Nevada, including Carson and Eagle Valleys, take on the shape of a small neighborhood. Most had a degree of self-sufficiency, possessing fuel storage, a power supply, water sources, social order, and on the larger ranches, cultural institutions.[134]

The Lompa Ranch barn and ancillary structures along Fifth Street in Carson City. Nevada SHPO, July 7, 2016.

Farm/Ranch complexes include a large array of resources related to ranching practices at the site. Farm/Ranch Complexes typically include a ranch headquarters or main ranch house, housing for ranch hands, corrals, shade trees, a repair shop, and storage buildings or structures for other ranch materials (fence wire, posts, hay, and

[134] Starrs, *Let the Cowboy Ride,* 11-12, 15; Marshall, 18.

horses). Carson and Eagle Valley ranches differed from Starr's typical features by rarely including windmills or water towers due to the availability of water from the Carson River, and the abundance of larger barns to store winter hay. However, secondary and tertiary facilities and their relationship to primary ranching headquarters remained consistent with Starr's synthesis. Resources like line camps, waterholes distant from the main complex, loading chutes, and holding corrals are just as critical in conveying the significance of these ranches to the upper Carson River's agricultural landscape since the mid-nineteenth century. However, as primary farm/ranch complexes are most likely to be retained, it is important to note their secondary and landscape features that help convey significance, such as bunkhouses, main yards, tree-lined approach roads, nearby fields, a blacksmith or trading shop, and a ceremonial entry. The relative intensity of agricultural operations in Carson and Eagle Valleys meant that the facilities often combined elements of traditional farming and ranching, growing labor-intensive produce and dairy products at the same facility that served as the headquarters for a much more geographically-expansive ranch operation. Most ranch owners in Nevada grew crops like alfalfa, wheat, and potatoes, but also raised cattle and sheep that summered many miles away on private in-holdings and public grazing land in the Sierra Nevada and Pine Nut Mountains.[135]

The character-defining features of a farm/ranch complex center on the components necessary for success in Nevada's environment, which is largely arid with a short growing season and limited water from snowmelt. As such, most farm/ranch complexes will have access to an irrigation network of some kind, that draws water from a central river, creek, or irrigation canal and distributes it into pasture or crop fields. The vast majority of crop fields are hay of various mixtures, either for pasture or for winter feed crops that will be stored in the primary barn. The corrals were used to pen animals, from the ubiquitous beef cattle and sheep, to work horses and oxen, the latter of which were popular work animals in Carson Valley through the nineteenth century. Fenced fields with hay or pasture crops would be quite common. While alfalfa (*Medicago sativa*) remained the dominant feed crop for livestock throughout much of Nevada's history into the present, it was almost always mixed with a variation of introduced varieties such as timothy (*Phleum pratense*), red top (*Agrostis gigantea*), and red clover (*Trifolium pratense*), and native grasses dominated by Basin wildrye (*Leymus cinereus*).[136]

Farm/Ranch Complexes in Carson Valley will almost invariably have a Barn and/or a Ranch House as an element within them, anchoring the spatial distribution of the complex. Exceptions to this are generally found on ranches that were primarily used for sheep or poultry raising in Carson Valley, where Poultry Houses or Loafing Sheds take the place of the larger barn. Details on both the Barn and Ranch House property types are outlined separately below, but they can also be contributing buildings to any Farm/Ranch Complex, if they have clear association to the property and integrity to the period of significance. There may be cases where a smaller or peripheral Farm/Ranch Complex, such as a field camp or corral that is some distance from a main ranch headquarters, may be eligible without the presence of either a Barn or a Ranch House, but these resources were not observed during the reconnaissance survey. Most Farm/Ranch Complexes, in addition to the Barn and Ranch House, will include all or some of the following resources that should be evaluated to determine their contributing status. Generally, these resources will not be individually eligible unless the building, structure, site, or object represents a singular link to a particular, significant, agricultural property, or is the last remaining resource of a significant ranching property. Examples of each resource type are provided below:

Barn – One of the most ubiquitous resources in a Farm/Ranch Complex is a Barn, as it served as the primary building for hay and equipment storage, and sheltering high value livestock such as horses and dairy cattle. Because of their architectural importance, they are treated as a separate property type below.

[135] Paul F. Starrs, "An Inescapable Range, or the Ranch as Everywhere," in *Western Places, American Myths: How We Think About the West*, by Gary J. Hausladen, ed., (Reno & Las Vegas: University of Nevada Press, 2003), 74; Starrs, *Let the Cowboy Ride*, 12-13.
[136] Dangberg, *Carson Valley*, 73; Dressler, 38.

Bunk House – Most larger farm/ranch complexes relied on seasonal, and sometimes year-round, labor and provided some form of workers' housing for these ranch hands, as is the case for company-level operations such as the Dressler Ranch, and the several Dangberg ranches in Carson Valley. Workers' housing tended to be more subdued and smaller in size than the primary Ranch House, but was often designed to blend with the larger complex, as is seen in the Bunkhouse at the Dangberg Home Ranch, and the architecturally-unified red brick housing at the Dangberg Sheep Ranch north of Minden. If present, possessing clear association to the property's significance, and retaining integrity to the period of significance, Bunk Houses should be included in a Farm/Ranch Complex historic district as contributing buildings.[137]

Bunk House at the Dangberg Home Ranch. Nevada SHPO, July 22, 2016.

[137] National Register of Historic Places, "Home Ranch," Minden, Douglas County, Nevada, NRIS# 80002466, Sec. 7, p2.

Red-brick worker housing at the Dangberg Sheep Ranch north of Minden. Nevada SHPO, July 22, 2016.

Cattle/Horse/Loafing Shed – As opposed to Sheds, below, Loafing Sheds are designed for use as outdoor shelter for livestock, especially sheep, and frequently have one elevation open to allow for livestock access. They tend to be opened south for sun exposure, but not always. If part of a dairy operation, a milking parlor will be near the loafing shed. It might also be near the feed area for the livestock, which tends to be paved and sloped for easier cleaning. If present, possessing clear association to the property's significance, and retaining integrity to the period of significance, Cattle/Horse/Loafing Sheds should be included in a Farm/Ranch Complex historic district as contributing structures.[138]

Loafing Shed at the Louis & Elmer Stodieck Ranch near Waterloo. Nevada SHPO, June 7, 2016.

Fencing, Corralling, Loading/Squeeze Chutes – Most Farm/Ranch Complexes will include a significant amount of fencing, corralling, and chutes to create controlled pathways for livestock. Fencing is generally used to demarcate open pasture and divide different sets or types of livestock, as well as to

[138] South Dakota State Historical Society (SDSHS), *Homesteading and Agricultural Development Context*, by Allyson Brooks and Steph Jacon, (Vermillion, South Dakota: 1994), 54.

divide livestock from fallow pasture or fields for crops such as wheat, barley, alfalfa, or potatoes. Fences are usually made with simple wood posts, either of scrap timber or squared posts, with wire in-between that is frequently, though not always, barbed to discourage cattle from pressing against it. The use of scrap timber in wood fencing is considered endemic to Mormon settled areas of the American West. Corralling is typically constructed near a barn or loafing shed and is used for more intensive work with livestock, such as breaking horses, branding livestock, or prepping cattle for market. Loading or squeeze chutes are usually attached to a corral space and used for loading livestock into wagons or trucks for transport to the market or slaughterhouse. Both of these are typically made from finished boards and squared posts, with sturdier construction due to the likelihood of livestock pressing or bumping against it. If present, possessing clear association to the property's significance, and retaining integrity to the period of significance, Fencing, Corralling, and Loading/Squeeze Chutes should be included in a Farm/Ranch Complex historic district as contributing elements. For particularly noteworthy features such as an important fence line, counting them as a contributing structure may be appropriate. For features that are contributing to the overall site of a ranch, the overall ranch grounds or important landscapes within the ranch should be counted as a contributing site, and these circulation and control features included as Historic Associated Features.[139]

Hay Processing Equipment

Hay growing was the mainstay of most Carson and Eagle Valley operations, making hay processing an important task. Especially in Mormon country, tools such as hay derricks and stackers were common features on the landscape. Hay derricks are endemic to Mormon-settled areas of the American west, and used a pulley system to stack hay and avoid spoilage. Hay stackers instead used sleds or platforms, although still used for stacking or holding hay to prevent spoilage. Most of these pieces of equipment became obsolete with the development of baling equipment by the early twentieth century, but they can be found on older farms and ranches. If present and retaining historic integrity, hay processing implements should be counted as contributing structures on a Farm/Ranch Complex as a contributing object.[140]

Granary/Corncrib – Granaries in Carson and Eagle Valleys are somewhat variable, and were used as small grain storage structures to hold various grains including corn. Most nineteenth century granaries are small, frame structures with shed or gable roofs, built on small masonry piers. They may often be buildings modified for use as a granary, especially those not on a raised foundation, and so care should be taken to examine the building's interior for significant modifications hinting at grain storage. On larger ranches, Barns were frequently modified to accommodate grain storage instead of having a stand-alone granary. During the twentieth century, farmers either replaced or added to their granaries with circular or oblong galvanized steel structures with conical roofs and ventilators. If present, possessing clear association to the property's significance, and retaining integrity to the period of significance, a Granary should be included in a Farm/Ranch Complex historic district as a contributing structure.[141]

Orchard – Orchards were relatively common on early Carson and Eagle Valley ranches as a source of produce for the farmers and ranchers themselves. However, few have survived due to economic changes and reductions in water availability. As early as the late-nineteenth century, orchard production throughout most of the country was commercial, making small family farms increasingly uncommon.

[139] SDSHS, 62; Noble and Cleek, 177.
[140] Noble and Cleek, 161-165.
[141] Ohio Historic Preservation Office, *How to Complete the Ohio Historic Inventory* by Stephen C. Gordon, (Columbus: Ohio Historical Society, 1992), 152; Cranston, 75.

The Homestead Act, and the lingering subsidy of small family farms at this time, meant the proliferation of small family orchards on most farms and small ranches at the encouragement of the General Land Office.

Orchards may be sited on infertile soils or in cleared areas, and may not be planted in association with any irrigation source, or consideration for layout or spacing. As a one-time planting venture, orchards provided an easy way to "prove up" under the Homestead Act, usually bearing fruit within five years. Not only providing food to the ranching or farming family, orchards in Carson and Eagle Valley provided easily marketable produce to travelers on the roads to California or in nearby mining communities. However, after 1880, easy railroad transportation and increasingly national markets required areas to specialize, and most of Carson and Eagle Valley's growing energies turned to dairying, beef cattle, wool growing, and hay production. Aside from small family orchards, most orchards were no longer maintained. However, H.F. Dangberg ran a rather large commercial orchard on his property along the East Fork of the Carson River in to the twentieth century. It appears the Ash Canyon ranch near Carson City also retained fruit orchards well into the twentieth century.[142]

As a result, most surviving orchards in Carson and Eagle Valleys will likely not be eligible for listing as individual resources, but will be contributing elements to Farm/Ranch Complexes. If present, possessing clear association to the property's significance, and retaining integrity to the period of significance, Orchards should be included in a Farm/Ranch Complex historic district as a contributing site, or, if relatively small and possessing only a handful of trees, as an Historic Associated Feature within the Farm/Ranch Complex's grounds. Survey revealed only two surviving orchards in the research area, one at the Ash Canyon Ranch in west Carson City, now owned by the Joost Land & Livestock Company, and one at the Adams Ranch north of Genoa. However, further intensive survey of ranches in the study area may reveal small surviving orchards in Carson and Eagle Valleys.[143]

[142] Susan A. Dolan, *Fruitful Legacy: A Historic Context of Orchards in the United States, with Technical Information for Registering Orchards in the National Register of Historic Places*, (Washington, D.C.: National Park Service, 2009), 60, 63; Dressler, 43.
[143] Dolan, 150.

Pastures and Fields – Pastures and fields are a critical component of historic Farm/Ranch Complexes, where livestock are put out to feed, or where hay crops are irrigated and grown for winter feed. Carson and Eagle Valley ranches would have sustained a variety of crops, from the ubiquitous alfalfa to timothy, red top, and red clover, but most hayfields tended to still include native grasses, dominated by Basin Wildrye (*Leymus cinereus*). With alfalfa stands generally exhausting themselves after 8 years of growth, other grains such as wheat, barley, and oats became important rotation crops to keep nutritious feed available for livestock. If present, possessing clear association to the property's significance, and retaining integrity to the period of significance, Pastures and Fields should be included in a Farm/Ranch Complex historic district as a single contributing site unless the separate features are each significant enough to be counted individually. Associated fences, minor irrigation ditches, roads, and other features associated specifically with Pastures and Fields can be included as Historic Associated Features to the contributing site.[144]

Louis & Elmer Stodieck Ranch, fields to the west of the complex. Nevada SHPO, June 7, 2016.

[144] Dressler, 42-43.

Poultry House or Chicken Coop – This is usually a single-story, shed-roof frame structure with vertical board wall surfaces, such as board-and-batten. Chicken coops often face south and will have several windows and doors on the south elevation to allow for good lighting and ventilation. Most Poultry Houses in the study area appear to be either the Closed Gable Roof or Lyding types. The Closed Gable Roof poultry house is an extended single-story building with access points along it for chickens and farmers to move in and out, often resembling a simple shed. The Lyding type has a shed roof with minimal or no eaves, often with pens built onto the front. Because Poultry Houses tend to be built from salvaged materials, or are salvaged structures themselves, it is likely that these structures will have been moved at least once as part of their use. This generally will not render a Poultry House non-contributing, especially if the relocation occurred before or during the period of significance for the Farm/Ranch Complex. A Poultry House that has been relocated within the Farm/Ranch Complex after the period of significance may still be contributing if its significance, historic use, and association to the property can be adequately conveyed. If present, possessing clear association to the property's significance, and retaining integrity to the period of significance, Poultry Houses or Chicken Coops should be included in a Farm/Ranch Complex historic district as contributing structures.[145]

Left: William Lampe Poultry House (center); Right: Privy at the William Lampe Ranch, constructed by the Works Progress Administration (Nevada SHPO, December 22, 2016).

Privy – Usually one of the smallest buildings in a ranch or farm complex, the privy or outhouse was a necessary part of any residence prior to the advent of plumbing. Most were narrow, single room, rectangular frame structures with a gable or shed roof and vertical board walls, but masonry is present although rare. If present, possessing clear association to the property's significance, and retaining integrity to the period of significance, Privies should be included in a Farm/Ranch Complex historic district as contributing structures.[146]

[145] Ohio HPO, 153; Noble and Cleek, 136-137.
[146] Ohio HPO, 156.

Ranch House – Another dominant building in most Farm/Ranch Complexes, a Ranch House will often be a potential contributing building to a Farm/Ranch Complex, if it possesses sufficient integrity. Ranch Houses were generally the headquarters and primary residence for any ranch operation, and the hub of social and family life on the ranch. As Ranch Houses may be individually significant as well, more detail is provided below in a separate property type.

Peter Van Sickle Ranch House north of Mottsville. Nevada SHPO, November 24, 2015.

Roads or Road System – Most Farm/Ranch Complexes will include roads to facilitate the transportation of people and goods to and from the complex, and the movement of equipment around the field and pasture system. Most will be unpaved, and may simply be ad-hoc paths worn down over decades of use rather than formal roads. If present, possessing clear association to the property's significance, and retaining integrity to the period of significance, a system of Roads should be included in a Farm/Ranch Complex historic district as a single contributing structure. However, if a specific road possesses unique importance, it may be called out separately as a single structure. Integrity for these linear features will generally be adequate if the historic road-bed materials (dirt, gravel, asphalt, etc.) are present, and the road's width and route are mostly intact.

Root Cellar – Constructed into a hillside or excavated ground, a root cellar was constructed to provide a cool dark environment for storage of fruits, root crops, and vegetables. It is usually a small gable-roofed structure atop a stone or concrete foundation, but size, shape, and configuration vary widely depending on the farm operation. If present, possessing clear association to the property's significance, and

retaining integrity to the period of significance, Root Cellars should be included in a Farm/Ranch Complex historic district as contributing structures.[147]

Sawmills – Sawmills are not specifically related to agricultural development, but did provide the lumber for the home and barn construction on the ranches and farms of Eagle and Carson Valleys. Their National Register eligibility under this context will generally be limited to those sawmills operated by area ranchers on their ranches, such as Ira Luther, and should generally be treated as contributing elements to larger ranching historic districts. The first sawmill to be established was built by millwright Thomas Knott on the mouth of the Carson (Woodfords) Canyon in 1853. Run by a flutter wheel, this first sawmill was sold that year to William Thorington who continued to operate it under the name Cary Mill. Knott also built a mill in Mill Creek Canyon (later known as Genoa Creek) in Genoa in 1854. Ira M. Luther, a rancher in the upper part of Carson Valley near the community of Fairview, established a sawmill at the mouth of Luther (or Fay) Canyon in 1858. Farther up the valley in Fredericksburg, California, several other sawmills provided lumber from the forests near there and Woodfords.[148]

Secondary Irrigation Features – Primary irrigation features such as reservoirs, canals, and main ditches typically were typically owned jointly by ranchers via incorporated water companies. Primary features are considered separately below. However, once primary water conveyances reached a particular rancher's property, he or she would usually access it by constructing laterals and minor ditches to distribute the water throughout the property. With flood irrigation being fairly common in alfalfa production, most laterals and minor ditches will follow the upland side of fields, with headgates spaced regularly to allow water to flow over a field's gentle grade. By the twentieth century, most farmers had plowed and leveled their fields to facilitate this flood irrigation process, contributing to the relatively flat valley floor seen today. Spent water at the lower side of the field was usually channeled into an outgoing ditch that would dump extra water back into the main conveyance for use downstream. If present, possessing clear association to the property's significance and retaining integrity to the period of significance, Secondary Irrigation Features can be included in a Farm/Ranch Complex historic district as a single network, counted as one contributing structure. However, if a particular lateral possesses unique significance, it may be counted individually as a separate structure from the rest of the irrigation network on the property.

[147] Ohio HPO, 156.
[148] Dangberg, *Carson Valley*, 51-53

A diversion box and culvert (left) and distribution ditch (right) on the Stodieck ranches near Waterloo. Nevada SHPO, June 7, 2016.

Sheds – Every Farm/Ranch Complex will likely have one or more Sheds of varying size. Among the most easily missed but most dynamic of ranching structures, Sheds are typically used for equipment storage, and are usually small, one-room structures housing smaller equipment such as tack, blacksmithing equipment and a forge, or other items. They will be flat, shed, or gable roofed and may be sited near a larger building or structure, serving a secondary purpose to their neighboring resources. They may be wood, usually board-and-batten, or corrugated metal. If present and possessing integrity, Sheds will be contributing structures to a Farm/Ranch Complex (please also see *Loafing Sheds*).

A collection of sheds on the Settelmeyer Ranch along the south side of Genoa Lane east of Genoa and west of US 395. Nevada SHPO, July 22, 2016.

Silos and Granaries – Extremely rare in Carson and Eagle Valleys, silos and granaries were constructed for storing green fodder or ensilage. Early granaries are of wood construction, but elevated with disks or other materials used to block access by animals. Silos are distinguished by their circular shape which allowed for the reduction of spoilage in the corners of the structure. Often built next to the main barn, a silo or granary is a common part of any ranch that depends on the provision of grain feed to sustain its livestock. The common use of hay, alfalfa, and open pasturage meant that silos were relatively uncommon in Eagle and Carson Valleys, although a small number do exist, including on the former Settelmeyer Ranch on Genoa Lane east of Genoa. If present, possessing clear association to the property's significance, and retaining integrity to the period of significance, Silos or Granaries should be included in a Farm/Ranch Complex historic district as contributing structures.[149]

Silos on the Frank Settelmeyer Ranch along Genoa Lane. Nevada SHPO, July 22, 2016.

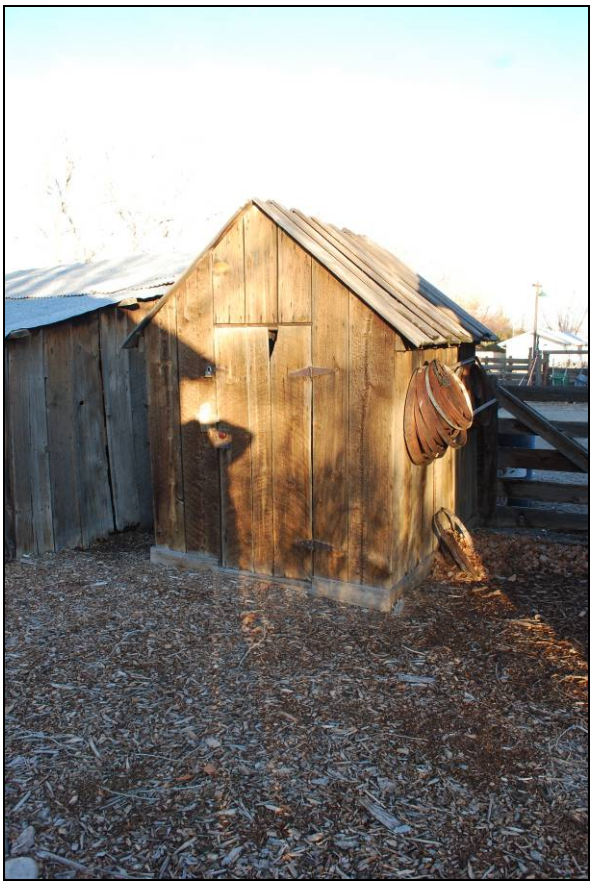
[149] Ohio HPO, 157; Noble and Cleek, 154-161.

Slaughterhouse/Butcher Shop – Slaughterhouses on individual Farm/Ranch Complexes were used by ranchers to slaughter beef for local consumption, and thus, are not as common outside the larger ranches of Carson and Eagle Valleys. Slaughterhouses will generally be smaller structures, around one-and-one-half story to accommodate a winch-wheel to hoist animal carcasses off the floor for cutting. They will usually have board-and-batten siding and may be on a raised foundation to accommodate blood flow out of the building. Due to the small percentage of beef stock slaughtered on the farms in this area, many slaughterhouses might serve a dual purpose, including a grain or hay loft storage above the slaughtering floor.[150]

Slaughterhouse at the Dangberg Home Ranch. Built between 1915 and 1916, this was possibly the largest such facility in the region. The roof was damaged prior to 1980 but has not been repaired, leading to the current deterioration. Nevada SHPO, July 22, 2016.

[150] Vanita Renee Cranston, "Vernacular Ranch Architecture: An Ethnohistorical Study," Master's Thesis, University of Nevada, Reno, 1991, 73.

Smokehouse – Although not common in Carson Valley, some larger ranches may have a smokehouse. This would be a small, one-story rectangular masonry or frame structure with a gable roof. It will usually be devoid of wall openings other than the door and small air vents. These generally became obsolete during the twentieth century with the advent of improved refrigeration and custom packing. If present, possessing clear association to the property's significance, and retaining integrity to the period of significance, Smokehouses should be included in a Farm/Ranch Complex historic district as contributing structures.[151]



Smokehouse at the William Lampe Ranch near Gardnerville. Nevada SHPO, December 22, 2016.

Springhouse – Also somewhat rare in Carson Valley, some ranches may have a springhouse. If a spring is present on the ranch property, a farmer might construct a small structure over the spring to limit vegetation and livestock damage to the water source. These are usually built of brick or local stone, are boxy and simple, and have a shed or gable roof and a small door for access. They are often built near a hillside or other typical spring source, but are otherwise difficult to distinguish from other farm buildings on the exterior. If present, possessing clear association to the property's significance, and retaining integrity to the period of significance, Springhouses should be included in a Farm/Ranch Complex historic district as contributing buildings.[152]

[151] Ohio HPO, 154.; Noble and Cleek, 146-147.
[152] Ohio HPO, 154; Noble and Cleek, 140.

Summer Kitchen or Kitchen House – Larger ranches will have summer kitchens to keep the heat of cooking away from the primary residence in hot summer days. Significantly larger ranches might also have a separate kitchen to provide meal service to ranch hands. A kitchen house will be a one- or two-story, rectangular frame building near the main farmhouse or bunkhouse. For most smaller ranches, a summer kitchen fell out of fashion as a result of electricity, refrigeration, and improved climate control in homes. If present, possessing clear association to the property's significance, and retaining integrity to the period of significance, Summer Kitchens or Kitchen Houses should be included in a Farm/Ranch Complex historic district as contributing buildings.[153]

Kitchen House and Stone Cellar west of the main house, Dangberg Home Ranch south of Minden. Nevada SHPO, July 22, 2016.

[153] Ohio HPO, 155.

Registration Requirements

In general, Farm/Ranch Complexes that demonstrate clear association and integrity to the agricultural development of Carson and/or Eagle Valleys will be eligible for listing as small historic districts. In the common case of nominating individual ranches, it is best if the boundaries of the district include the main complex and any land that was historically associated with the ranch during its historic period, if it retains sufficient integrity. This may or may not correspond to current ownership boundaries, but will often correspond to current fence lines, tree lines, or irrigation lines.

Ranch Complexes will most often be eligible under Criterion A in the area of *Agriculture*. The Complex must have been used as a farm, ranch, orchard or other agricultural operation during the period outlined above in Section E. All resources with a strong association to agriculture along the upper Carson River in Carson and Eagle Valleys will be eligible under Criterion A if they retain sufficient integrity, which includes at least a representative portion of the agricultural landscape that sustained the ranch, including pastures, fields, and irrigation resources.

A Farm/Ranch Complex significant under Criterion B must demonstrate significance to an important person's life or career as outlined above, and retain strong integrity to the period during which that property contributed to that individual's historic importance. The Dangberg Home Ranch southwest of Minden is a strong example of a ranching property that has been listed in the National Register under Criterion B.

Under Criterion C, a Farm/Ranch Complex will be eligible in the area of *Architecture* if its collective contributing resources reflect a particularly important or well-preserved example of a ranching complex in Carson or Eagle Valleys. In this event, comparison to other ranching complexes in the area must be completed to demonstrate that the property in question is a uniquely well-preserved example. Farm/Ranch Complexes can also be significant under Criterion C in the area of *Agriculture* if they reflect the master planning envisioned by a major ranch owner or livestock company in which the Farm/Ranch Complex served not only as a site of agricultural development, but also provided worker housing for individuals and/or families, recreational facilities, family gardening space, etc. The Buckeye Ranch and Sheep Ranch, both north of Minden-Gardnerville and constructed by the Dangberg Land and Livestock Company, are excellent examples of Farm/Ranch Complexes that may have significance under Criteria A and C in the area of *Agriculture*.

In some cases, where a series of intact and significant ranches are contiguous, it may be appropriate to nominate them together as a larger agricultural historic district. It was fairly common for Carson Valley ranchers to locate their Farm/Ranch Complexes at the corners of their land near neighboring ranchers to share resources and provide security. It was also common for ranching families to expand from their initial complex, acquiring neighboring land and transferring it to second- or third-generation family members. In many cases, these concentrations of ranches became the smaller communities of Carson Valley, such as Centerville, Waterloo, Mottsville, and Sheridan. Although infill and modern development reduce the areas that may be eligible as larger ranching districts, there are some concentrations of ranches in the upper portion of the valley around Waterloo, Centerville, and Luther that may lend themselves to registration in this manner.

Historic integrity in the context of a Farm/Ranch Complex involves a connection between multiple aspects of a property's physical features. To retain integrity, a Farm/Ranch Complex should have strong integrity in location, setting, feeling, association, and design. Materials and workmanship are also important, but will have more importance for properties significant under Criteria B, C, or D. The recommended application of the seven aspects of integrity to a Farm/Ranch Complex, based on the four Criteria, is outlined below:

1. Location - Original location is critical in the context of agriculture, since the historic use and function of farms and ranches is indelibly connected to the landscape in which the buildings, structures, and other features of a ranch were developed. In general, a Farm/Ranch Complex must possess integrity of location to be eligible under any Criteria. Smaller agricultural buildings or structures that contribute to the significance of a Farm/Ranch Complex may still retain integrity of location if they have been moved within the confines of the complex of which they were/are a part. If all or a portion of a Farm/Ranch Complex are moved from their original location, they will generally not be eligible for the National Register as they have particular difficulty meeting Criteria Consideration B for moved properties, especially as they no longer retain a spatial relationship to the significant fields and pastures where farming or ranching took place.

2. Design – Under Criterion A, a Farm/Ranch Complex will have integrity of design if its overall functional features that existed and served those functions during their historic period are retained in their historic form, plan, and general style. It is expected that resources will have changed over time as they continued to contribute to the agricultural development of Carson and Eagle Valleys. Non-historic additions or modifications to contributing properties may not render a resource non-contributing, or the entire Farm/Ranch Complex ineligible, if the character-defining historic elements of design are still present and easily recognized. Such important characteristics in a Farm/Ranch Complex might include the spatial organization of a complex, the presence of fields, pastures, a corral, a fence, and irrigation features in their historic configuration, and ranch houses, barns, and secondary structures retaining their historic form and massing.

   To be eligible under Criterion B, a Farm/Ranch Complex must retain all the attributes listed above, and must reflect the design as present during the period of significance for the property associated with the significant individual in question. Contributing resources should not have been moved since the end of the period of significance, and non-historic modifications to the scale, primary massing, and defining design features of key resources should not be present or should be minimal. These additional integrity requirements also apply to Farm/Ranch Complexes significant under Criterion C under *Architecture*, and under Criterion D.

3. Workmanship – For a Farm/Ranch Complex significant under any Criteria, integrity of workmanship among the buildings is less important than integrity of the overall landscape, but a district will generally have integrity if a majority of its resources, or at least its key resources such as the Ranch House, Barn, and key sites or landscape areas such as a farmyard, orchard, or corral (if present), show the basic elements of the historic craftsmanship or labor that built them and modified them over time. This might include mortise-and-tenon joinery in the barn, milled lumber on a Ranch House, but also additions and alterations reflecting “ad-hoc” changes by the ranch owner during the period of significance, such as upgrading a barbed wire fence with juniper posts to one with metal posts in the 1940s, upgrading a wooden irrigation flume to concrete, or shifting a field historically seeded for pasturage and plowing it for fruit produce. Integrity of workmanship in this case is defined by the historic and present use of the Complex more than the architectural integrity of buildings and landscapes in most cases. Alterations to individual resources within a Farm/Ranch Complex that affect integrity of workmanship may render that resource non-contributing to the district. For example, a c.1910 wooden barn with mortise-and-tenon joinery and wood siding would no longer contribute to the Farm/Ranch Complex if the wood siding were removed and replaced with steel after the period of significance, or if the mortise-and-tenon frame was removed and replaced with steel bracing after the period of significance.

4. Materials – Integrity of materials in a Farm/Ranch Complex is defined in *National Register Bulletin 30* as the physical "construction materials of buildings, outbuildings, roadways, fences, and other structures," as well as the makeup of vegetation on the Farm/Ranch Complex during its operation. For a Farm/Ranch Complex nominated under Criterion A, strict integrity of materials is less important than integrity of overall design. Changes and upgrades that are typically necessary for the continuing function of farms and ranches often involve changes to materials, such as the addition of steel siding to a ranch house, or the cutting of trees in windbreaks. It is common for farmers or ranchers to replace plantings, both large and small, with new varieties more suited to the local climate, and this can occur without severely diminishing integrity of materials. These are all acceptable changes to materials under Criterion A. Integrity of materials becomes more important for properties nominated under Criteria B, C, or D, especially concerning the built resources of a Farm/Ranch Complex. Although alterations to vegetation and landscape areas are expected, the materials used to construct or modify buildings or structures during the period of significance should be retained. For example, a property such as the Buckeye Ranch developed by the Dangbergs should retain the defining unpainted, red brick exterior walls, white wood trim details, and corrugated steel roofing that are important features in defining the planned vision of the complex as constructed by the Dangberg Land & Livestock Company.[154]

5. Setting - Setting is a critical component of any agricultural resource, especially a Farm/Ranch Complex. In most cases, as long as the environment surrounding a ranch property is generally still rural/agricultural in nature and reflects its historic period, that property will have integrity of setting. Setting may be negatively impacted by encroachment from residential and commercial development, especially in farms and ranches in and around Minden, Gardnerville, and Carson City. Some degree of loss of integrity in setting is acceptable, as long as the feeling and association with agriculture within the period of significance is retained. A property will have integrity of setting if its overall landscape and surroundings still generally reflect its period of significance.

6. Association - While integrity of feeling and association are more intangible and difficult to measure, they are generally present when other areas of integrity are high, and pertain to the ability of a visitor to a particular agricultural property being able to recognize the historical associations of the property with its agricultural past. The majority of surviving agricultural resources in Carson Valley are still used for agricultural purposes, although this is not the case in Eagle Valley. While continued agricultural use is not necessary for a property to retain integrity of association, it can be a strong contributor. Generally, a Farm/Ranch Complex will possess integrity of association if its overall landscape still reflects its history of agricultural production.

7. Feeling – Much like integrity of association, integrity of feeling is difficult to measure, but will generally be present when integrity in the other five aspects are high. To possess integrity of feeling, a Farm/Ranch Complex should retain the overall sense of an agricultural landscape. Integrity of feeling may be high for active ranches that still run similar livestock as were present in the ranch's historic period, or grow similar crops such as alfalfa or hay as were present in the ranch's historic period.

Surveyed Ranches in Carson and Eagle Valleys

During this project, Nevada SHPO staff surveyed 95Farm/Ranch Complexes and other agriculturally-related resources, most of which were Farm/Ranch Complexes. A full list of surveyed Farm/Ranch Complexes is

[154] U.S. Department of the Interior, National Park Service, *National Register Bulletin 30: Guidelines for Evaluating and Documenting Rural Historic Landscapes*, (Washington, D.C., rev. 1999), https://www.nps.gov/nr/publications/bulletins/nrb30/nrb30_8.htm, accessed December 8, 2016.

below. Although efforts were made to make this list exhaustive, there is a likelihood that a small number of properties were missed in the survey effort. The list is nonetheless a valuable overview of the Farm/Ranch Complexes in Carson and Eagle Valleys.

Surveyed Farm/Ranch Complexes (alphabetical by Area/Community, then Current Name)				
Historic Name	Current Name	Date Established[155]	Address	Area/Community
Buckeye Ranch (Dangberg)	Bently Ranch	1920	1745 Buckeye Road	Buckeye
Roubahn Ranch	Andersen Ranch	1862	1800 Kings Canyon Road	Carson City
Roubahn/Robinson Ranch	Bell Ranch	1862	2100 Kings Canyon	Carson City
Gilson Ranch	Joost Land & Cattle Co. Ranch	1866	2940 Ash Canyon Road	Carson City
Meyers Ranch	Lompa Ranch	1862	2200 E. Fifth Street	Carson City
Anderson, Charles, Ranch	Anderson Family Ranch	1913	785 Centerville Lane	Centerville
Behrman Ranch	Haase Ranch	1900	1350 Dresslerville Road	Centerville
Cordes Ranch	Cordes Ranch	1900	1055 NV Hwy 88	Centerville
Curry Ranch	Schwake Ranch	1862	W of NV Hwy 88 at Kimmerling Road	Centerville
Friche Ranch	Fricke Ranch	1900	1255 Centerville Lane	Centerville
Helwinkel, John, Ranch	Sierra Vista Holsteins	1913	1128 Centerville Lane	Centerville
Helwinkel, John, Ranch	Sierra Vista Holsteins	1910	1182 Centerville Lane	Centerville
Pedrojetta Ranch	Kleiner Ranch	1913	917 NV Hwy 88	Centerville
Squires Ranch	Rahbeck Ranch	1862	694 NV Hwy 88	Centerville
Stodieck, J.H., Ranch / Di Salvo Ranch	Cereghino Ranch	1913	1282 Centerville Lane	Centerville
Thran Ranch	Sinnott Ranch	1913	876 Centerville Lane	Centerville
Tiedge Ranch	Lawrence Ranch	1913	1200 Lawrence Lane	Centerville
White Ranch	White Ranch	1913	1201 Waterloo Lane	Centerville
Jacobsen Ranch	Peri Ranch	1901	1608 Pinenut Court	Dresslerville
Park Ranch	Corley Ranch	1911	859 N. US Hwy 395	Dresslerville
Gilliland Ranch	Settelmeyer Ranch	1867	750 N. US Hwy 395	Dresslerville
Twelve Mile House	Twelve Mile House	1855	950 N. US Hwy 395	Dresslerville
Cary Ranch	Groenendyke Ranch	1862	551 Foothill Road	Fairview
Cary Ranch	Jackson Ranch	1862	575 Jackson Ranch Road	Fairview

[155] The year established has been estimated based on the County Assessor information, taken into consideration with available primary and secondary literature and survey observations where available and where time allowed. The proliferation of 1913 and 1862 as establishment years hinges upon in-depth documentation completed by the USGS in 1862 as well as by State Engineer Richard Allen in 1913. This date should not be considered confirmed in all cases, but considered a helpful starting point for in-depth research on each property, if warranted. In many cases, the date has been interpolated from historic survey and topographic maps, stating the earliest confirmed date of the ranch being present in the record.

Luther/Heidtman Ranch	Brooks Ranch	1862	445 Foothill Road	Fairview
Olds Ranch	Ahern Ranch	1862	397 Foothill Road	Fairview
Wyatt Ranch	Holden Ranch	1862	501 Foothill Road	Fairview
Marsh Ranch	Martin Ranch	1879	901 Dressler Lane	Fredericksburg
Marsh Ranch	Alley Ranch	1879	401 NV Hwy 88	Fredericksburg
Frantsen, H., Ranch	Jacobsen Ranch	1913	1525 Toler Lane	Gardnerville
Lampe, H.C., Ranch	Park Ranch	1913	1424 Toler Lane	Gardnerville
Lampe, William Ranch	Jacobs Berry Farm	1887	1335 Centerville Lane	Gardnerville
Scheckte Ranch	Hussman Land & Livestock Ranch	1862	1250 N. US Hwy 395	Gardnerville
Adams Ranch	Adams Ranch	1852	2575 Jacks Valley Road	Genoa
Cook Ranch	Dascoli Ranch	1913	2855 Jacks Valley Road	Genoa
Lyon Ranch	Trimmer Ranch/ Ranch No. 1	1864	231 Genoa Lane	Genoa
Schacht Ranch	Galeppi Ranch	1890	2301 Galeppi Lane	Genoa
Settelmeyer Ranch	Settelmeyer Ranch	1913	2388 N. US Hwy 395	Genoa
Settelmeyer, F., Ranch / Boyd Ranch	Settelmeyer Ranch	1862	400 Genoa Lane	Genoa
Wright Ranch	Williams Ranch	1862	2242 Main Street	Genoa
Wright Ranch	Cochran Ranch	1870	2335 Main Street	Genoa
Johnson, A., Ranch	BIA Ranch	1862	Jacks Valley Road	Jack's Valley
Snyder, J., Ranch	Schneider Ranch	1862	300 Jacks Valley Ranch Road	Jack's Valley
Winters Ranch	Ascuaga Ranch	1855	150 Jacks Valley Ranch Road	Jack's Valley
Bartels, Herman, Ranch	Gunderson Ranch	1913	2572 Heybourne Road	Johnson Lane
Godecke, C.W. Ranch	Bently Complex	1913	2298 Heybourne Road	Johnson Lane
Johnson, Hans, Ranch	Siteview Ranch	1913	900 Johnson Lane	Johnson Lane
Schacht, Arthur, Ranch	Waldrep Ranch	1913	961 Airport Road	Johnson Lane
Thran, William, Ranch	Borcher & Cross Ranches	1913	933 Michael Lane	Johnson Lane
Thran, William, Ranch	Midkiff Ranch	1913	929 Michael Lane	Johnson Lane
Uhart-Wennhold Ranches	Uhart Ranch	1913	2360-2400 Heybourne Road	Johnson Lane
Neil and Gray Ranch	Fagen Ranch	1866	West Kings Canyon Road	Kings Canyon
Stevens and Schwies Ranch	Old Woods Ranch	1866	West Kings Canyon Road	Kings Canyon

Dressler Ranch / Irving Ranch	Dressler Ranch	1860	1039-1045 Dressler Lane	Long Valley
Dressler, William, Ranch (owned only)	Bently Ranch	1913 (buildings likely 1965)	650 Anderson Ranch Road	Long Valley
Heidtman, Karl, Ranch	Long Valley Ranch	1862	1467 Indian Creek Road	Long Valley
Jones, D.L., and Ellen Lloyd Ranch	Thunderbird Ranch	1913	641 NV Hwy 88	Long Valley
Salge Ranch	Thunderbird Ranch	1862	575 NV Hwy 88	Long Valley
Taylor Ranch	Kawcak Ranch	1913	580 NV Hwy 88	Long Valley
Dangberg Home Ranch	Dangberg Home Ranch	1862	1450 NV Hwy 88	Minden
Dangberg Sheep Ranch	Bently Ranch	1913	1089 Stockyard Road	Minden
Dreyer Ranch	Dreyer 395 Ranch	1913	1761 N. US Hwy 395	Minden
Klauber Ranch	Park Ranch	1857	798 Tamarack Drive	Minden
Springmeyer Land & Livestock Co.	Mack Land & Cattle Co. Ranch	1901	1580 7th Street	Minden
Allerman, Fred & Laura, Ranch	Morgan Ranch	1913	1461 Foothill Road	Mottsville
Bartels, Ernest, Ranch	Prescott-Erwin Ranch	1913	1778 Foothill Road	Mottsville
Cary Ranch	Foothills Ranch	1862	1155 Foothill Road	Mottsville
Christianson-Fiel Ranch	Hone Ranch	1913	490 Mottsville Lane	Mottsville
Godecke, Henry, Ranch	Hone Ranch	1913	698 Mottsville Lane	Mottsville
Hansen Ranch	Wiley Ranch	1913	220 Hansen Lane	Mottsville
Heise Ranch	Heise Ranch	1913	1250 NV Hwy 88	Mottsville
Howard Ranch	Dreyer Foothill Ranch	1862	1051 Foothill Road	Mottsville
Johnson, Chris, Ranch	Bonafede-Scossa Ranch	1913	570 Mottsville Lane	Mottsville
Park, David, Ranch	Springmeyer Ranch	1864	575 Mottsville Lane	Mottsville
Lange Ranch	Herbig Ranch	1913	480 Muller Lane	Mottsville
Muller, William, Ranch	Muller Ranch	1913	400 Muller Lane	Mottsville
Rabe, Willie, Ranch	Willow Stay Ranch II	1913	671 Mottsville Lane	Mottsville
Van Sickle Station	Wyatt, Ranch, Teig Ranch	1855	1974 Foothill Road	Mottsville
Van Sickle, Oscar T., Ranch	Pope Valley Ranch	1913	1675 Foothill Road	Mottsville
	Guaglianone Ranch		5010 Hells Bells Road	New Empire
Bird-Ulrich Ranch	Silver Saddle Ranch – White Complex	1945	4901 Carson River Road	New Empire
Chartz-Herlax	Silver Saddle Ranch –	1935	4901 Carson River Road	New Empire

Ranch	Red Complex			
Haskell Ranch	Bell Ranch	1862	5000 Hells Bells Road	New Empire
Barber Ranch	Scott Ranch	1860	416 Cuttin-Loose Lane	Sheridan
Helwinkel, John, Ranch	Sheridan Creek Equestrian Center	1913	551 Centerville Lane	Sheridan
Miller Ranch	Scossa Ranch	1862	676 Foothill Road	Sheridan
Murphy Ranch	Young Ranch	1862	975 Sheridan Lane	Sheridan
Palmer Ranch	Colyer Ranch	1860	775 Foothill Road	Sheridan
F.W. Stodieck Ranch	Stodieck Ranch (1868)	1868	1367 Wilhelm Place	Waterloo
Henningsen Brothers Ranch	Gansberg Ranch	1913	1037 Waterloo Lane	Waterloo
Henningsen Brothers Ranch	Frensdorff Ranch	1913	1012 Waterloo Lane	Waterloo
Hussman, William, Ranch	Crouch Ranch	1900	1095 Waterloo Lane	Waterloo
Lightle Ranch	Stodieck Ranch (1904)	1860	1350 Wilhelm Place	Waterloo
Louis Stodieck	Caruana Ranch	1913	851 Mottsville Lane	Waterloo

Associated Property Type: Ranch House

A Ranch House typically served as the primary residence for a particular ranching family as they established and grew their agricultural operation. Ranch Houses not only served as a private residence for the family that owned the ranch, but frequently became the business office for the ranch operations as well. Often second only to the barn, Ranch Houses signify one of the most significant investments of a ranch family's effort in building and maintaining the ranch, and tended to be the most architecturally articulate. The construction of Ranch Houses throughout the historic period in Carson and Eagle Valleys transitioned along with the popular styles of the time and the availability of materials. Earlier homes were mostly sod or log cabins designed to simply "prove up" on a land claim without much thought to a long-term residence. Many of these earliest ranching homes were demolished quickly in favor of larger Ranch Houses. They followed what has been termed "National Folk" forms and were frequently vernacular in nature, having very little in the way of architectural styling, but revealing much about the building traditions and available materials along the upper Carson River in the mid-19th century.

Most Ranch Houses will follow popular stylistic trends depending on when they were constructed. Architecturally, those Ranch Houses present in Carson and Eagle Valleys are generally represented by the Mid-19th Century, the Late Victorian period, the Late 19th & 20th Century Revivals, and the Late 19th and Early 20th Century American movements, with the Victorian period dominating. Redevelopment on many ranches in the valley has meant that ranchers demolished many historic ranch houses between the 1960s and the present to make way for newer houses from the Modern or post-Modern movements. Indicative of the rolling establishment of ranches from the 1850s into the 1920s, the historic housing styles and types generally correspond with the stylistic period during which Ranch Houses were built. Many of the earliest ranches possess main houses styled after Romantic period forms, such as Greek or Gothic Revival. Of the 86 Ranch Houses observed as part of this study, six were Greek Revival and eight were Gothic Revival, or approximately 16.3% of the historic Ranch Houses. Moving into the Victorian era, styles and types of this variety are more common, with 23 Folk Victorian homes of some variety observed. Another seven had no expressed style, but were classifications of house types common to the Victorian era, totaling 34.9%. In addition, two Craftsman-style dwellings, and one Dutch Colonial Revival were observed. Revealing the proclivity of ranch owners to modernize their Farm/Ranch Complexes, 19 of the observed Ranch Houses in the study are were either Ranch or Minimal Traditional residences, or 22.1% of homes. Another 19 could not be observed from the public right-of-way, and will need surveyed with permission from the owner before a classification can be made. This is in part because many ranch owners kept their residences well-shielded from wind and weather by the judicious use of ornamental trees, including cottonwoods (*Populus* sp.), elms (*Ulmus* sp.), and mixtures of conifers. Nearly every ranch house and its ancillary structures are shaded by at least a dozen such trees, if not more, providing clear indicators on the broad, open landscape of where farm and Farm/Ranch Complexes are located.

However, the architectural trends in the valley appear to be tightly linked to the ethnic influx of non-native settlers to the area beginning in the 1850s. The earliest permanent dwellings constructed under the governance of the Church of Jesus Christ of Latter Day Saints (LDS) were Greek Revival. Most of the LDS Church's earliest settlements tended to favor Greek Revival styling in both homes and public buildings, with the style becoming endemic of Utah's early settlement architecture. The use of subdued versions of the Greek Revival style in residences such as at Van Sickle Station reflect this trend. Greek Revival buildings in the study area tend to be one-story or one-and-half story residences with a large footprint and a low-pitched roof that is typically front-gabled without forming a clean temple front. Although frame buildings are most common, such as the Dangberg Home Ranch residence, some are stone such as the Van Sickle Station residence. They tend to

have multi-light fenestration through the building, Classical columns or pilasters incorporated into exterior features, and a single, prominent gable end dominating the façade. Although not strictly symmetrical, they do incorporate symmetrical elements including balanced bays and gable ends.[156]

Although the Gothic Revival style was popular at the same time and a prolific early style in the northwest Nevada region, its use appears to have lingered somewhat, remaining popular long after it had become effectively antiquated in the rest of the United States. The motivation for this extended use of Gothic Revival into the 1890s is not clear. Gothic Revival architecture originated in the 1850s and was generally out of style by the 1870s. For example, the Gothic Revival Wilhelm Lampe residence in Gardnerville was constructed in 1898, two decades after the use of the style had diminished elsewhere in the country. Although a second revival of Gothic architecture occurred in the early-twentieth century throughout the United States, this second wave tended to focus on public and religious buildings, such as university campuses, rather than on residential architecture. Of the eight Gothic Revival residences observed in the study area, four are Asymmetrical, three are the Paired Gable variety, and only one, the home at the Martin Ranch in Fredericksburg, is a Paired Gable type. Gothic Revival residences in the area are exclusively frame buildings with lapboard siding. Some are subdued examples with little styling and few or no verge boards such as the Lampe residence. Others, such as the Springmeyer Ranch near Mottsville, are well-articulated with verge boards and pointed arch windows.[157]

Gothic Revival-style Wilhelm Lampe Ranch House south of Gardnerville. Nevada SHPO, December 22, 2016.

[156] Thomas Carter and Peter Goss, *Utah's Historic Architecture, 1847-1940: A Guide*, (Salt Lake City: Utah State Historical Society, 1988), 99.
[157] Virginia McAlester, *A Field Guide to American Houses*, 2nd ed., (New York: Alfred A. Knopf, 2013), 266-280; New Mexico Department of Cultural Affairs, Historic Preservation Division, *Architectural Classification: Style and Type*, November 2013, 50, http://www.nmhistoricpreservation.org/assets/files/arms/HCPIArchitecturalStyles20131115.pdf, accessed February 28, 2017.

The Victorian Era dwellings are the most diverse in format, although they too are dominated by the Folk Victorian style. Several incline toward the Queen Anne style, specifically the Free Classic Front Gabled variety, but lack sufficient detailing to classify them as such. It is rare to find decorative spindle work on the farm houses in Carson and Eagle Valleys, although their counterparts in nearby Genoa and Carson City frequently possess them. Many of the residences with no style, but with recognizable types, such as the Pyramidal Box, reflect certain Victorian features, such as the central block with projecting bays. Many of the Folk Victorian homes follow this pattern, having enough recognizably Victorian patterning to be classified as such. Modest spindle work and lathe-turned porch posts are frequently giveaways. Many of these Folk Victorian examples demand further study in order to classify each residence by type rather than simply style. One of the more popular varieties of the Folk Victorian are single-story, side-gabled residences that appear to be among the earlier homes in the valley. Some include long, full-width porches on their facades with simple squared posts, suggesting their construction earlier in the settlement of the valley. Perhaps most unique among the Ranch Houses of the study area is a residence on the former Johnson Ranch now part of Washoe tribal lands. The house here is eclectic, with allusions to late-Victorian style with its massing, its multiple, moderately-pitched gables, and its use of ornamental concrete block on its exterior walls. However, its overall symmetry and the jerkin-head roof form on the gable ends makes the building difficult to classify, although its outer wall material suggests an early-twentieth century construction when use of ornamental concrete block was at its peak.[158]

A standard Side-Gabled hall-parlor ranch house on the Muller Ranch (left) and the Johnson Ranch/BIA ranch house along Jack's Valley Road (right). Nevada SHPO, July 7, 2016.

Colonial Revival and Craftsman residences indicative of the 1910s and 1920s are extremely rare, suggesting that most successful ranchers had established themselves and constructed their homes prior to that time. Research thus far supports this generalization. The single Dutch Colonial Revival example is at the former Hansen Ranch in Mottsville, with a gambrel roof with intersecting gables and shingle siding. Although William Hansen, who owned and developed the ranch, was an American from California born in approximately 1880, his father was Danish, perhaps providing an influence on the choice of style. The two Craftsman-style dwellings are on the former Park (Dresslerville) and Bartels (Mottsville) ranches. The Park residence southeast of Gardnerville is a large, side-gabled dwelling with copious multi-light windows, and decorative brackets, as well as a prominent, centered gable dormer on the front with similar detailing and exposed rafter tails. The Bartels

[158] McAlester, 396-405; National Register of Historic Places, *Ornamental Concrete Block Buildings in Colorado, 1900 to 1940*, Colorado, 1997, http://www.historycolorado.org/sites/default/files/files/OAHP/crforms_edumat/pdfs/626.pdf, accessed February 28, 2017.

residence is much more subdued, being a simple, single-story, side-gabled dwelling with an intersecting front-gable housing a walled-in porch, all with exposed rafter tails and six-over-one wood sash windows.[159]

Craftsman-style bungalow at the Park/Corley Ranch near Dresslerville. Nevada SHPO, July 7, 2016.

Signaling the replacement of many ranch houses with newer accommodations following the Second World War, the proliferation of mid-century Modern styles and types is common. Minimal Traditional-type homes on ranches tend to be smaller buildings with almost no detailing. Reminiscent of simpler Folk Victorian buildings, these residences frequently have broader lapboard or masonite siding, simple one-over-one wood sash or aluminum frame windows. Ranch-type houses are more articulated, with Colonial styling such as a low-pitched roof, decorative shutters, and usually a gable-ell or simple side-gabled plan. Most are fairly simple articulations of their house types, with very little, if any decoration. The single exception to this among newer homes on historic ranches is the Contemporary-style dwelling on the White Ranch near Centerville. Emulating the Rustic Contemporary so common in the Lake Tahoe Basin, the large, irregularly-massed residence includes heavy timber framing, several interlocking gable-roofed blocks, shingle covering on some features such as chimneys, and a dominating two-story, low-pitch gable entry facing east, with glass curtain walls.

[159] Nevada Historical Census, "William M. Hansen," 1910 Census, University of Nevada, Reno, https://library.unr.edu/census, accessed February 27, 2017

Registration Requirements

Most Ranch Houses in Carson and Eagle Valleys will be the anchor for a Farm/Ranch Complex and will be potentially contributing to an historic district if they have sufficient integrity. However, Ranch Houses may also be eligible individually, especially in cases where they are individually significant, or when other aspects of a particular ranching operation no longer possess integrity and the Ranch House stands as the only intact example. This may be the case with former ranching properties near both Minden-Gardnerville and Carson City where the land for a ranch operation has been sold and re-developed but the Ranch House remains. The Empire Ranch House in Carson City at 4681 Morgan Mill Road is an example where the main Ranch House remains and has good historic integrity, but the vast majority of outbuildings and ranch land were redeveloped in the late-1990s to create the Empire Ranch Estates subdivision and Empire Ranch Golf Course.

To be contributing to a Farm/Ranch Complex, a Ranch House should demonstrate association to the overall importance of the ranch, and possess good integrity to the period of significance. To be individually-eligible, a Ranch House must demonstrate *individual* significance. Individual significance for a Ranch House under Criterion A or B will be rare as that association is usually carried by the full Farm/Ranch Complex rather than its individual pieces and parts. An exception to this might be a case where the other elements of the Farm/Ranch Complex have been demolished, and the Ranch House is the only remaining resource associated with an important ranch, making the house individually eligible. In most cases, if a Ranch House possesses individual significance, it will be under Criterion C in the area of Architecture for displaying a unique or significant example of a type, style, or method of home construction in ranch environments in the study area. For example, the Knox-Springmeyer House near Mottsville may be eligible as a prominent and perhaps the best-articulated example of Gothic Revival architecture on a Farm/Ranch Complex in Carson Valley. Ranch Houses may also be eligible under Criterion D for their potential to contribute information about the future study of vernacular architecture and construction methods in Carson and Eagle Valleys. In order to be eligible under Criterion D, specific research questions that address broad issues of vernacular architecture must be established, along with the clear ability of the property to address those research questions. To be eligible individually, Ranch Houses should possess strong integrity in all seven aspects including location, setting, feeling, and association, but especially of design, materials, and workmanship.

Observed Ranch Houses (alphabetical, by House Style/Type, then Area/Community)				
Historic Name	Current Name	Date Ranch Established[160]	House Style and/or Type[161]	Area/Community
White Ranch	White Ranch	1913	Contemporary	Centerville
Park Ranch	Corley Ranch	1911	Craftsman	Dresslerville
Bartels, Ernest, Ranch	Prescott-Erwin Ranch	1913	Craftsman	Mottsville
Hansen Ranch	Wiley Ranch	1913	Dutch Colonial Revival	Mottsville
Johnson, A., Ranch	BIA Ranch	1920 (circa)	Eclectic	Jack's Valley

[160] The year constructed has been estimated based on the County Assessor information, taken into consideration with available primary and secondary literature and survey observations where available and where time allowed. The proliferation of 1913 and 1862 as establishment/construction years hinges upon in-depth documentation completed by the USGS in 1862 as well as by State Engineer Richard Allen in 1913. This date should not be considered confirmed in all cases, but considered a helpful starting point for in-depth research on each property, if warranted. In many cases, the date has been interpolated from historic survey and topographic maps, stating the earliest confirmed date of the ranch being present in the record. It has been used to date a ranch house only where the record and the typology of the house correspond.

[161] "Not observed" refers to those properties where the presence of a primary Ranch House could be confirmed via aerial imagery, but access or landscape prohibited a clear view of the building in order to classify it. Intensive survey may add or modify the terms in this column.

Roubahn Ranch	Andersen Ranch	1862	Folk Victorian	Carson City
Roubahn/Robinson Ranch	Bell Ranch	1862	Folk Victorian	Carson City
Cordes Ranch	Cordes Ranch	1900	Folk Victorian	Centerville
Friche Ranch	Fricke Ranch	1900	Folk Victorian	Centerville
Heckathorne Ranch House	Jesser Ranch House	1865	Folk Victorian	Centerville
Jetter Ranch House	Dunagan Ranch House	1865	Folk Victorian	Centerville
Stodieck, J.H., Ranch / Di Salvo Ranch	Cereghino Ranch	1913	Folk Victorian	Centerville
Thran Ranch	Sinnott Ranch	1913	Folk Victorian	Centerville
White Ranch	White Ranch	1913	Folk Victorian	Centerville
Jacobsen Ranch	Peri Ranch	1901	Folk Victorian	Dresslerville
Twelve Mile House	Twelve Mile House	1855	Folk Victorian	Dresslerville
Lampe, H.C., Ranch	Park Ranch	1913	Folk Victorian	Gardnerville
Scheckte Ranch	Hussman Land & Livestock Ranch	1862	Folk Victorian	Gardnerville
Lyon Ranch	Trimmer Ranch/ Ranch No. 1	1864	Folk Victorian	Genoa
Settelmeyer, F., Ranch / Boyd Ranch	Settelmeyer Ranch	1862	Folk Victorian	Genoa
Uhart-Wennhold Ranches	Uhart Ranch	1913	Folk Victorian	Johnson Lane
Dressler Ranch / Irving Ranch	Dressler Ranch	1860	Folk Victorian	Long Valley
Dangberg Sheep Ranch	Bently Ranch	1913	Folk Victorian	Minden
Dreyer Ranch	Dreyer 395 Ranch	1913	Folk Victorian	Minden
Springmeyer Land & Livestock Co.	Mack Land & Cattle Co. Ranch	1901	Folk Victorian	Minden
Christianson-Fiel Ranch	Hone Ranch	1913	Folk Victorian	Mottsville
Lightle Ranch	Stodieck Ranch (1904)	1860	Folk Victorian	Waterloo
Muller, William, Ranch	Muller Ranch	1913	Gable Front and Wing	Mottsville
Rabe, Willie, Ranch	Willow Stay Ranch II	1913	Gable Front and Wing	Mottsville
Gilliland Ranch	Settelmeyer Ranch	1867	Gothic Revival	Dresslerville
Cary Ranch	Jackson Ranch	1862	Gothic Revival	Fairview
Marsh Ranch	Martin Ranch	1879	Gothic Revival	Fredericksburg
Lampe, William Ranch	Jacobs Berry Farm	1887	Gothic Revival	Gardnerville

Wright Ranch	Williams Ranch	1862	Gothic Revival	Genoa
Heidtman, Karl, Ranch	Long Valley Ranch	1862	Gothic Revival	Long Valley
Park, David, Ranch	Springmeyer Ranch	1864	Gothic Revival	Mottsville
F.W. Stodieck Ranch	Stodieck Ranch (1868)	1874	Gothic Revival	Waterloo
Squires Ranch	Rahbeck Ranch	1862	Greek Revival	Centerville
Dangberg Home Ranch	Dangberg Home Ranch	1900	Greek Revival	Minden
Cary Ranch	Foothills Ranch	1862	Greek Revival	Mottsville
Van Sickle Station	Wyatt, Ranch; Teig Ranch	1855	Greek Revival	Mottsville
Henningsen Brothers Ranch	Gansberg Ranch	1913	Greek Revival	Waterloo
Hussman, William, Ranch	Crouch Ranch	1900	Greek Revival	Waterloo
Curry Ranch	Schwake Ranch	1862	I-House	Centerville
Chartz-Herlax Ranch	Silver Saddle Ranch – Red Complex	1935	Massed Plan Side Gabled	New Empire
Meyers Ranch	Lompa Ranch	1862	Minimal Traditional	Carson City
Anderson, Charles, Ranch	Anderson Family Ranch	1913	Minimal Traditional	Centerville
Thran Ranch	Sinnott Ranch	1913	Minimal Traditional	Centerville
Schacht, Arthur, Ranch	Waldrep Ranch	1913	Minimal Traditional	Johnson Lane
Lange Ranch	Herbig Ranch	1913	Minimal Traditional	Mottsville
	Guaglianone Ranch		Minimal Traditional	New Empire
Bird-Ulrich Ranch	Silver Saddle Ranch – White Complex	1945	Minimal Traditional	New Empire
Haskell Ranch	Bell Ranch	1862	Minimal Traditional	New Empire
Gilson Ranch	Joost Land & Cattle Co. Ranch	1866	Not observed	Carson City
Behrman Ranch	Haase Ranch	1900	Not observed	Centerville
Adams Ranch	Adams Ranch	1852	Not observed	Genoa
Cook Ranch	Dascoli Ranch	1913	Not observed	Genoa
Schacht Ranch	Galeppi Ranch	1890	Not observed	Genoa
Settelmeyer Ranch	Settelmeyer Ranch	1913	Not observed	Genoa
Wright Ranch	Cochran Ranch	1870	Not observed	Genoa
Snyder, J., Ranch	Schneider Ranch	1862	Not observed	Jack’s Valley
Winters Ranch	Ascuaga Ranch	1855	Not observed	Jack’s Valley
Thran, William, Ranch	Midkiff Ranch	1913	Not observed	Johnson Lane
Neil and Gray Ranch	Fagen Ranch	1866	Not observed	Kings Canyon
Stevens and Schwies Ranch	Old Woods Ranch	1866	Not observed	Kings Canyon

Dressler, William, Ranch (owned only)	Bently Ranch	1913 (buildings likely 1965)	Not observed	Long Valley
Jones, D.L., and Ellen Lloyd Ranch	Thunderbird Ranch	1913	Not observed	Long Valley
Salge Ranch	Thunderbird Ranch	1862	Not observed	Long Valley
Taylor Ranch	Kawcak Ranch	1913	Not observed	Long Valley
Klauber Ranch	Park Ranch	1857	Not observed	Minden
Miller Ranch	Scossa Ranch	1862	Not observed	Sheridan
Henningsen Brothers Ranch	Frensdorff Ranch	1913	Not observed	Waterloo
Johnson, Chris, Ranch	Bonafede-Scossa Ranch	1913	Pyramidal Box	Mottsville
Helwinkel, John, Ranch	Sierra Vista Holsteins	1910	Ranch	Centerville
Pedrojetta Ranch	Kleiner Ranch	1913	Ranch	Centerville
Tiedge Ranch	Lawrence Ranch	1913	Ranch	Centerville
Bartels, Herman, Ranch	Gunderson Ranch	1913	Ranch	Johnson Lane
Johnson, Hans, Ranch	Siteview Ranch	1913	Ranch	Johnson Lane
Thran, William, Ranch	Borcher & Cross Ranches	1913	Ranch	Johnson Lane
Uhart-Wennhold Ranches	Uhart Ranch	1913	Ranch	Johnson Lane
Godecke, Henry, Ranch	Hone Ranch	1913	Ranch	Mottsville
Godecke, Henry, Ranch	Hone Ranch	1913	Ranch	Mottsville
Heise Ranch	Heise Ranch	1913	Ranch	Mottsville
Howard Ranch	Dreyer Foothill Ranch	1862	Ranch	Mottsville
Van Sickle, Oscar T., Ranch	Pope Valley Ranch	1913	Temple Front	Mottsville
Louis Stodieck	Caruana Ranch	1913	Temple Front	Waterloo

Associated Property Type: Barn

Among the most dominant of agricultural buildings, Barns will frequently be contributing buildings in a larger Farm/Ranch Complex if they retain sufficient historic integrity. In some rare cases, they may be individually eligible for the National Register if they are exceptionally significant examples of barn architecture in Carson or Eagle Valleys. This will generally require outstanding architectural integrity to the barn's original construction and design as an agricultural building, including its exterior features, floorplan, and interior framing system. However, it is important to note that in most cases, a Barn cannot convey its architectural significance without the rest of a ranching complex, even if that complex consists of corral space, irrigation features, and open fields and pastures, without any residences or administrative buildings nearby. In most cases, barns will not be individually eligible, but rather will be potentially contributing buildings to a larger Farm/Ranch Complex. Barns rarely stood alone, being integral pieces to a larger agricultural process, and as a result, it is unlikely that any except the largest and/or best preserved barns will be individually eligible for the National Register. They have been treated separately due to their primary importance to farm and ranch operations in the study area and their unique architectural typology.[162]

Left: The barn (left) and accompanying equipment shed (center) at the Oscar T. Van Sickle/Pope Valley Ranch north of Mottsville; Right: The Miller/Scossa Barn along Foothill Road south of Sheridan. Nevada SHPO, July 7, 2016.

Barns are central but flexible architectural features of a ranch landscape, capable of being used for storage, social gatherings, shelter, and other necessary activities common in an agricultural landscape. They were typically one of the most significant investments in cash and labor for farming and ranching families, competing only with the ranch house for its importance and centrality to ranching landscapes. Although historically, barns had been used as small granaries, storing hay and grain crops, barns in the western United States primarily sheltered livestock, especially high-value working animals such as horses, mules, and family dairy animals. Most features of the barn were intended to serve a purpose: windows to illuminate interior activities, paint on the exterior to preserve the wood against harsh weather, or a cupola or monitor on the roof ridge to ventilate hay and avoid mold. Most barns included a hayloft for storage of cut grass or alfalfa. Their main levels usually included corral space for working animals, such as horses, mules, and oxen. Lower levels, if present, would be used for precise work, such as blacksmithing and other equipment repair.[163]

[162] National Register of Historic Places, *Agricultural Resources of Boulder County* Multiple Property Documentation Form, Boulder County, Colorado, NRIS 64500987, F59.
[163] Paul F. Starrs, "The Barn Where it Belongs," in Stephen R. Davis, *Sagebrush Vernacular: Rural Architecture in Nevada*, (Reno: Nevada Humanities Committee, 2003), 22-23, 25; Paul Oatman, "Timber Frame Barns of Carson Valley," in Davis, *Sagebrush Vernacular*, 27; Dangberg, *Carson Valley*, 112; Jiusto & Brown, *Hand Raised*, 2, 7.

Observed Barn Types

Based on observations made in June of 2016, and the context outlined earlier in this document regarding barn architecture, Barn types that can be registered have been categorized into types below. The barns of the Eastern Sierra Nevada display a unique diversity of different framing methods and ethnic building traditions. However, they do retain several consistencies in both layout and overall form. Almost all are braced timber frame structures, with mortise-and-tenon joinery anchored along some form of central aisle, although the orientation of the aisle varies. The most prominent variation is in roof form, and thus, roof form has been used to provide the primary classifications of barn types in Carson and Eagle Valleys, as follows:

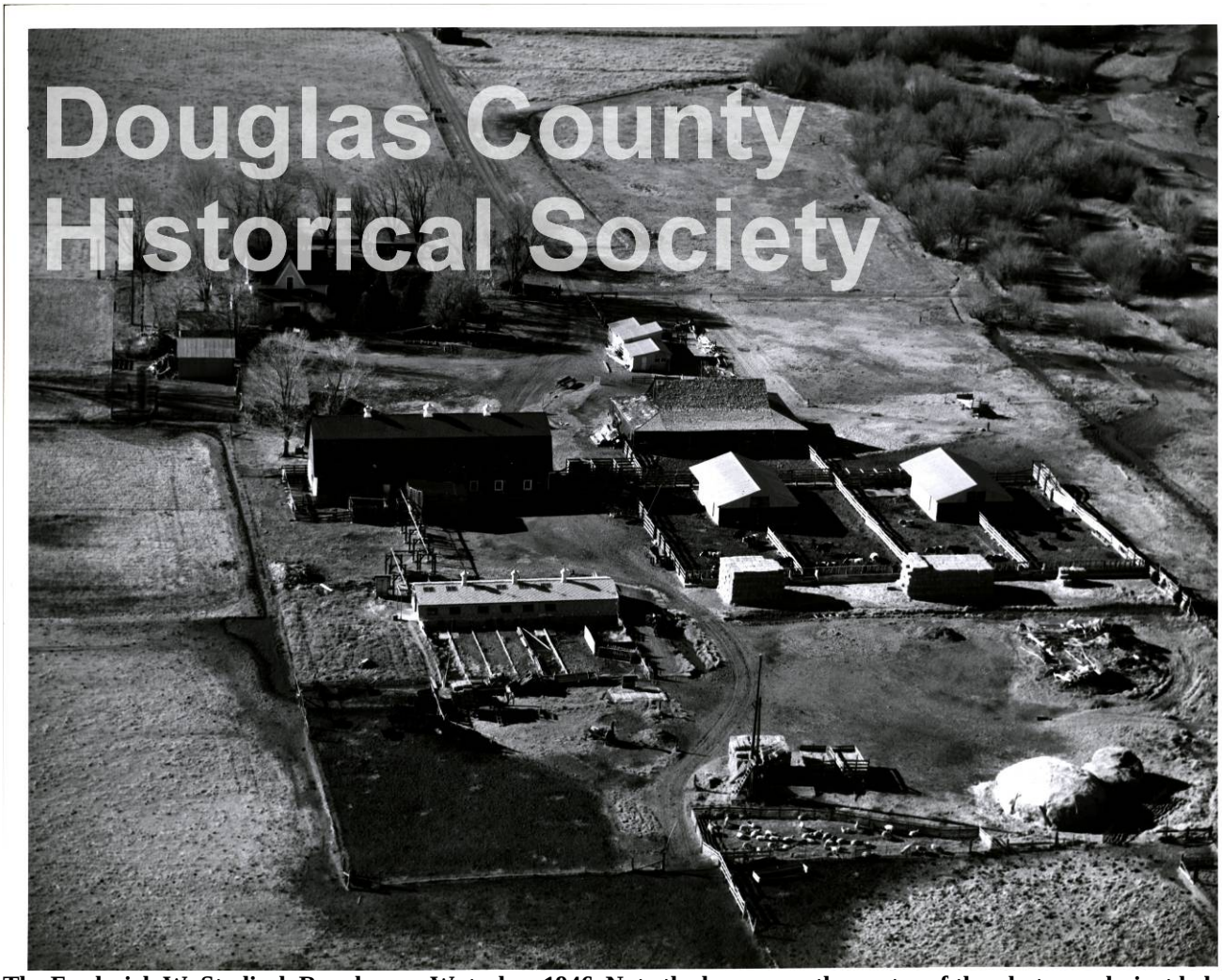
Transverse Crib Barn – Most endemic of the Carson and Eagle Valley ranching operations, these barns reflect a large, typically two-and-one-half story construction, with a moderately to steeply pitched, front-gabled roof that extends down to the first floor level (6 to 10 feet above the floor sill). They are defined by a central passageway leading through the front-gabled entry along the "spine" of the building, sometimes including a rear entry, although sometimes the rear has additions for storage or processing space. They have a large hay loft space for storing large volumes of hay for winter feed, and frequently have indoor corrals for high-value stock such as horses and dairy cattle on the first floor, allowing hay to be thrown down from the loft into the corral spaces. The roof form may vary, with many having single-pitch roofs, while others reveal the side-aisles with a vertical roof drop on the sides of the center aisle. There may be additions onto the barn of varying sizes to accommodate new uses or equipment, or simply to expand storage space.

Scossa Barn along Foothill Road, an example of a Transverse Crib Barn with a flush roof. Nevada SHPO, July 7, 2016.

Reflecting the smaller operations in the region, several ranches in the area retain the Transverse Crib configuration, but have a smaller hay loft revealed by vertical drops on the exterior roof. These variations are generally a single story, but occasionally two. Ranchers likely constructed these primarily for horse stock, or for smaller farming and ranching operations. They also occasionally appear on

ranches as secondary barns, where a larger, primary barn, usually still of the Transverse Crib configuration, may exist. A smaller barn typically indicates less need to store hay, as well as less need for winter shelter for high-value stock such as dairy cattle or large horse teams. These smaller barns seem to indicate ranches established in the early-twentieth century. The reduced need for hay storage by this time may have been facilitated by the establishment of the town of Minden with a railroad terminus along the Virginia & Truckee Railroad, and the creation of a large hay storage warehouse near the depot there, allowing area ranchers to avoid the capital costs of large hay-storage barns.

Gambrel roof variations of the Transverse Crib type are extremely rare, with only two recorded in the study area, one at the F.W. Stodieck Ranch in the Waterloo Community (shown below), and one at the Lompa Ranch in Carson City. These barns retain the transverse center aisle, and side aisle flanks, but include a hip along the roof line to create a gambrel configuration.

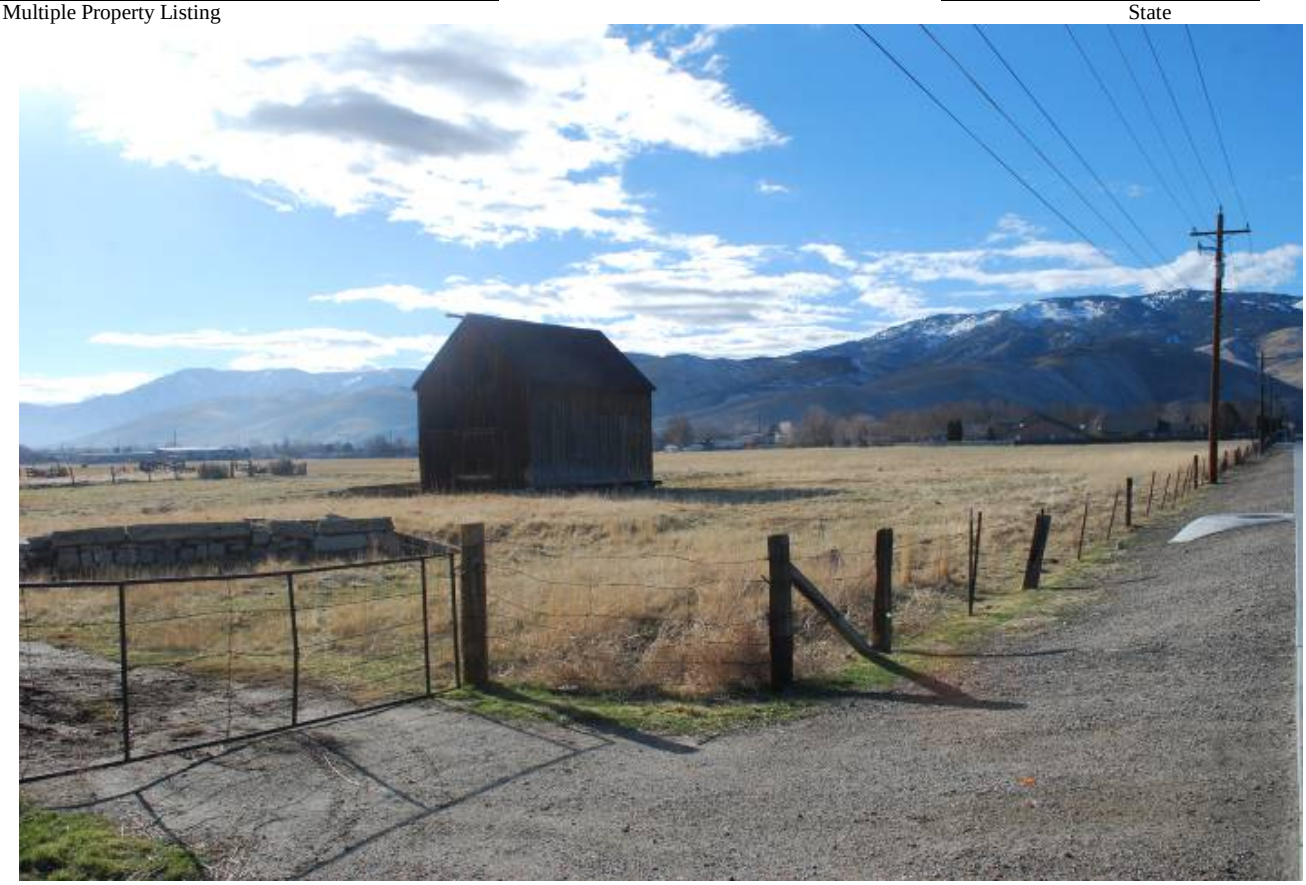


The Frederick W. Stodieck Ranch near Waterloo, 1946. Note the barn near the center of the photograph, just below (east of) the Gothic Revival Ranch House. Courtesy of the Douglas County Historical Society.

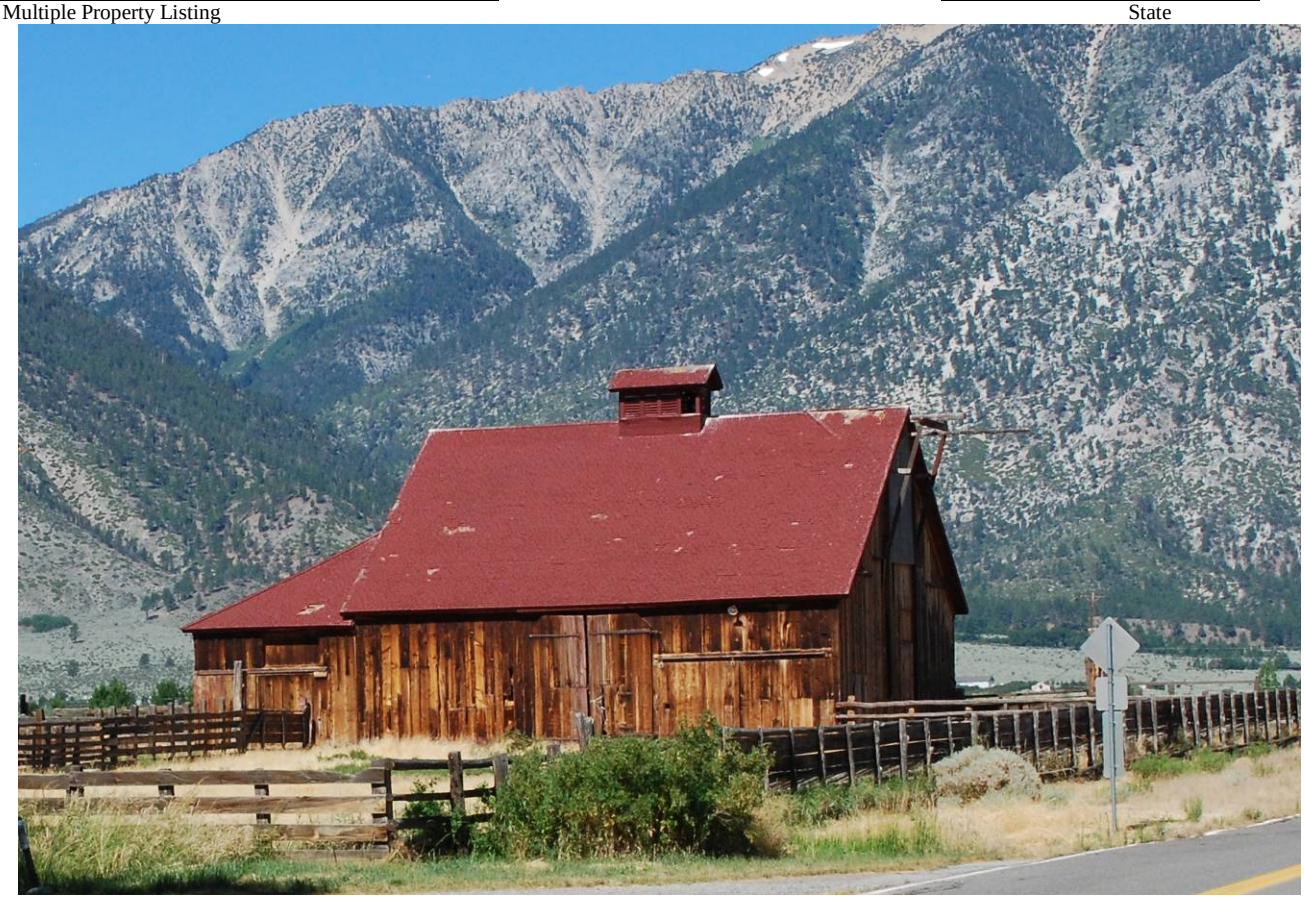
Three-Portal Barn – Similar to the Transverse Crib Barn but relatively rare in Carson and Eagle Valley are Three-Portal Barns. These barns are still large, typically of two-and-one-half story construction, with a moderately pitched, front-gabled roof that extends down to the first floor level (6 to 10 feet above the floor sill). They are defined by a central passageway leading through the front-gabled entry along the "spine" of the building, but differ from the Transverse Crib Barns in that they have side-aisles along the exterior that are accessed by their own exterior openings. They have a large hay loft space for storing large volumes of hay for winter feed, and frequently have indoor corrals for high-value stock such as horses and dairy cattle on the first floor, allowing hay to be thrown down from the loft into the corral spaces. As with Transverse Crib Barns, the roof form may vary, with many having single-pitch roofs, while others reveal the side-aisles with a vertical roof drop on the sides of the center aisle. There may be additions onto the barn of varying sizes to accommodate new uses or equipment, or simply to expand storage space. The Wilhelm Lampe Barn in Gardnerville is an example of a Three-Portal Barn with flush side-aisles, and with an addition onto its rear elevation to accommodate grain storage bins.


Left: Jacobsen-Peri Ranch barn, an example of a Three-Portal Barn with revealed side aisles. NVSHPO, July 7, 2016; Right: Heidtman Barn near Dresslerville, a variation of a Three-Portal Barn. NVSHPO, December 29, 2016.

Three Bay Barn – This barn type is extremely rare in the study area, with only six surviving examples documented in the study area. A seventh example stands at the Louis Stodieck Ranch near Waterloo, but underwent a renovation in 2017 that altered its floorplan out of the three-bay configuration. This barn type is generally has a relatively small footprint but high profile of about two-and-one-half stories, defined by its interior split into three bays, often divided by primary H-frame structural beams. It can have either a side-drive (door on the side of the building) or front-drive (door on the front gable) configuration. Most are side-gabled, with a hay fork apparatus on the façade, and a hay loft taking up most of the barn above the first floor, suggesting both Mormon and Dutch influences in their design. The moderately-pitched roof extends to the top of the second story, usually around eighteen feet above the wall sill. The first floor is often divided into a center bay that provides access for wagons, flanked by corral space for specific animals, such as a horse or mule team, and perhaps a small number of family milking cows. The roof crest may or may not have a monitor for ventilation. They may also have experienced modifications to accommodate new equipment or use as a result of market and technology changes. For example, the Louis Stodieck Barn south of Minden had nearly its entire north elevation cut away to accommodate larger tractor equipment during the 1950s (this elevation of the Stodieck Barn has since been remodeled).



A Three Bay Barn on the Lompa Ranch in Carson City. Nevada SHPO, 2016.



A Three Bay Barn on the Dressler Ranch near Dresslerville in Carson Valley. Note the unusually large footprint and large centered side entrance. Nevada SHPO, 2016.

German Bank Barn – There is one example of a traditional German Bank Barn known at the time of this study; the Van Sickle Barn at Van Sickle Station. Reconnaissance in Carson Valley, in Carson City, and in Alpine County, California, did not reveal any other examples of German Bank Barns, or Grundscheiers in the greater study area. However, further survey in the region might reveal additional examples that were not visible from public rights-of-way. As outlined above, traditional German barn-builders constructed these three-story barns into hillsides or into raised embankments to facilitate a careful division of space. The basement level, usually walled with stone, included corral and milking space for dairy stock, with at least one open side for access into an outdoor corral. They constructed the main floor at grade with reinforced timber and wood decking primarily for loading or unloading hay wagons, as well as storing equipment. Typically, the upper floor or floors would be simple, unattached wood decking that provided a hayloft, allowing for dumping the hay down onto wagons, or down two floors into the basement for feeding stock.

The Van Sickle Station Barn along Foothill Road, and the only known barn in Carson Valley to strictly follow German-style Bank Barn construction. Note the three levels, with a basement-level livestock space (right), a reinforced main floor for wagons and equipment (entry is centered on the south elevation not shown, with a graded dirt entry), and a hay loft above. Nevada SHPO, November 24, 2015.

Surveyed Barns in Carson and Eagle Valleys

*Since specific research on each ranch was not conducted in most cases during this project, and the known dates of construction for barns vary widely, no dates of construction have been included. Intensive survey documentation or nominations to the National Register of Historic Places will provide more in-depth information about each barn, including an estimated construction date.

Observed Barns (alphabetical by Barn Type, then Area/Community)			
Historic Name	Current Name	Barn Type[164]	Area/Community
Van Sickle Station	Wyatt Ranch, Teig Ranch	German Bank Barn	Mottsville
Meyers Ranch	Lompa Ranch	Three Bay Barn	Carson City
Squires Ranch	Rahbeck Ranch	Three Bay Barn	Centerville
Gilliland Ranch	Settelmeyer Ranch	Three Bay Barn	Dresslerville
Wright Ranch	Williams Ranch	Three Bay Barn	Genoa
Dressler Ranch / Irving Ranch	Dressler Ranch	Three Bay Barn	Long Valley
Van Sickle, Oscar T., Ranch	Pope Valley Ranch	Three Bay Barn	Mottsville
Jacobsen Ranch	Peri Ranch	Three Portal Barn	Dresslerville
White Ranch	White Ranch	Three-Portal Barn	Centerville
Luther/Heitman Ranch	Brooks Ranch	Three-Portal Barn	Fairview
Wyatt Ranch	Holden Ranch	Three-Portal Barn	Fairview
Lampe, William Ranch	Jacobs Berry Farm	Three-Portal Barn	Gardnerville
Scheckte Ranch	Hussman Land & Livestock Ranch	Three-Portal Barn	Gardnerville
Godecke, C.W. Ranch	Bently Complex	Three-Portal Barn	Johnson Lane
Heidtman, Karl, Ranch	Long Valley Ranch	Three-Portal Barn	Long Valley
Johnson, Chris, Ranch	Bonafede-Scossa Ranch	Three-Portal Barn	Mottsville
Buckeye Ranch (Dangberg)	Bently Ranch	Transverse Crib Barn	Buckeye
Bell Ranch	Bell Ranch (Hells Bells Road)	Transverse Crib Barn	Carson City
Gilson Ranch	Joost Land & Cattle Co. Ranch	Transverse Crib Barn	Carson City
Meyers Ranch	Lompa Ranch	Transverse Crib Barn	Carson City
Roubahn/Robinson Ranch	Bell Ranch	Transverse Crib Barn	Carson City
Roubahn/Robinson Ranch	Bell Ranch	Transverse Crib Barn	Carson City
Anderson, Charles, Ranch	Anderson Family Ranch	Transverse Crib Barn	Centerville
Behrman Ranch	Haase Ranch	Transverse Crib Barn	Centerville

[164] In most cases, barns were classified by type according to direct field observations. However, because few ranches were accessed as part of the survey effort, all observations were made from the public right-of-way, making observation of some properties difficult. Therefore, classifications of barn types, although mostly accurate, may be subject to revision after intensive survey.

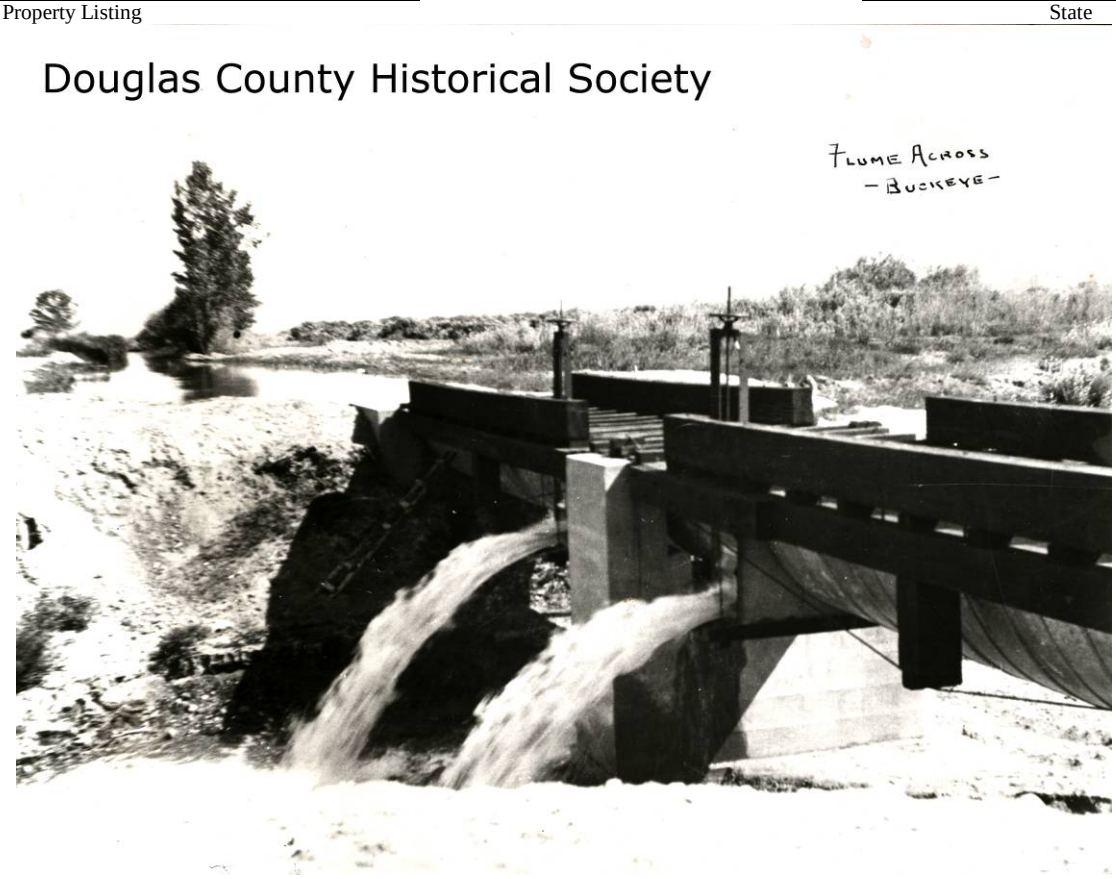
Observed Barns (alphabetical by Barn Type, then Area/Community)			
Historic Name	Current Name	Barn Type[164]	Area/Community
Behrman Ranch	Haase Ranch	Transverse Crib Barn	Centerville
Curry Ranch	Schwake Ranch	Transverse Crib Barn	Centerville
Friche Ranch	Fricke Ranch	Transverse Crib Barn	Centerville
Helwinkel, John, Ranch	Sierra Vista Holsteins	Transverse Crib Barn	Centerville
Pedrojetta Ranch	Kleiner Ranch	Transverse Crib Barn	Centerville
Stodieck, J.H., Ranch / Di Salvo Ranch	Cereghino Ranch	Transverse Crib Barn	Centerville
Tiedge Ranch	Lawrence Ranch	Transverse Crib Barn	Centerville
White Ranch	White Ranch	Transverse Crib Barn	Centerville
Gilliland Ranch	Settelmeyer Ranch	Transverse Crib Barn	Dresslerville
Park Ranch	Corley Ranch	Transverse Crib Barn	Dresslerville
Cary Ranch	Groenendyke Ranch	Transverse Crib Barn	Fairview
Cary Ranch	Groenendyke Ranch	Transverse Crib Barn	Fairview
Olds Ranch	Ahern Ranch	Transverse Crib Barn	Fairview
Wyatt Ranch	Holden Ranch	Transverse Crib Barn	Fairview
Marsh Ranch	Alley Ranch	Transverse Crib Barn	Fredericksburg
Marsh Ranch	Martin Ranch	Transverse Crib Barn	Fredericksburg
Frantsen, H., Ranch	Jacobsen Ranch	Transverse Crib Barn	Gardnerville
Adams Ranch	Adams Ranch	Transverse Crib Barn	Genoa
Lyon Ranch	Trimmer Ranch/ Ranch No. 1	Transverse Crib Barn	Genoa
Schacht Ranch	Galeppi Ranch	Transverse Crib Barn	Genoa
Schacht Ranch	Galeppi Ranch	Transverse Crib Barn	Genoa
Settelmeyer, F., Ranch / Boyd Ranch	Settelmeyer Ranch	Transverse Crib Barn	Genoa
Wright Ranch	Cochran Ranch	Transverse Crib Barn	Genoa
Johnson, A. Ranch	BIA Ranch	Transverse Crib Barn	Jack's Valley
Snyder, J., Ranch	Schneider Ranch	Transverse Crib Barn	Jack's Valley
Snyder, J., Ranch	Schneider Ranch	Transverse Crib Barn	Jack's Valley
Snyder, J., Ranch	Schneider Ranch	Transverse Crib Barn	Jack's Valley
Winters Ranch	Ascuaga Ranch	Transverse Crib Barn	Jack's Valley
Winters Ranch	Ascuaga Ranch	Transverse Crib Barn	Jack's Valley
Winters Ranch	Ascuaga Ranch	Transverse Crib Barn	Jack's Valley
Uhart-Wennhold Ranches	Uhart Ranch	Transverse Crib Barn	Johnson Lane
Stevens and Schwies Ranch	Old Woods Ranch	Transverse Crib Barn	Kings Canyon
Dressler, William, Ranch (owned only)	Bently Ranch	Transverse Crib Barn	Long Valley
Heidtman, Karl, Ranch	Long Valley Ranch	Transverse Crib Barn	Long Valley

Observed Barns (alphabetical by Barn Type, then Area/Community)			
Historic Name	Current Name	Barn Type[164]	Area/Community
Jones, D.L., and Ellen Lloyd Ranch	Thunderbird Ranch (North)	Transverse Crib Barn	Long Valley
Taylor Ranch	Kawcak Ranch	Transverse Crib Barn	Long Valley
Dangberg Home Ranch	Dangberg Home Ranch	Transverse Crib Barn	Minden
Dreyer Ranch	Dreyer 395 Ranch	Transverse Crib Barn	Minden
Klauber Ranch	Park Ranch	Transverse Crib Barn	Minden
Springmeyer Land & Livestock Co.	Mack Land & Cattle Co. Ranch	Transverse Crib Barn	Minden
Cary Ranch	Foothills Ranch	Transverse Crib Barn	Mottsville
Christianson-Fiel Ranch	Hone Ranch (west)	Transverse Crib Barn	Mottsville
Godecke, Henry, Ranch	Hone Ranch (east)	Transverse Crib Barn	Mottsville
Godecke, Henry, Ranch	Hone Ranch (east)	Transverse Crib Barn	Mottsville
Hansen Ranch	Wiley Ranch	Transverse Crib Barn	Mottsville
Heise Ranch	Heise Ranch	Transverse Crib Barn	Mottsville
Howard Ranch	Dreyer Foothill Ranch	Transverse Crib Barn	Mottsville
Lange Ranch	Herbig Ranch	Transverse Crib Barn	Mottsville
Rabe, Willie, Ranch	Willow Stay Ranch II	Transverse Crib Barn	Mottsville
Rabe, Willie, Ranch	Willow Stay Ranch II	Transverse Crib Barn	Mottsville
Haskell Ranch	Bell Ranch	Transverse Crib Barn	New Empire
Barber Ranch	Scott Ranch	Transverse Crib Barn	Sheridan
Miller Ranch	Scossa Ranch	Transverse Crib Barn	Sheridan
Murphy Ranch	Young Ranch	Transverse Crib Barn	Sheridan
Palmer Ranch	Colyer Ranch	Transverse Crib Barn	Sheridan
F.W. Stodieck Ranch	Stodieck Ranch	Transverse Crib Barn	Waterloo
F.W. Stodieck Ranch	Stodieck Ranch	Transverse Crib Barn	Waterloo
Henningsen Brothers Ranch	Frensdorff Ranch	Transverse Crib Barn	Waterloo
Lightle Ranch	Stodieck Ranch	Transverse Crib Barn (remodeled into Three Bay configuration)	Waterloo

Associated Property Type: Primary Irrigation Feature

As with all agriculture in the arid regions of the United States, irrigation is a critical element in sustaining farming and ranching operations. Some of the first developments in the valley following Euro-American settlement of the upper Carson River in the 1850s were the construction of irrigation ditches off of the Carson River and its tributaries. On the first map series for Carson Valley completed in 1862, ditches already appear near some of the earliest ranches to be established. Alongside formal irrigation ditches, common practice along the Carson River and its tributaries in these years was to cut the banks of the river and feeder creeks to spread the water flow and encourage more lush grass growth. Most of the valleys earliest ditches, many of which remain today, were first constructed between 1859 and the mid-1870s, including the Lightle (1860), Allerman (1861), Cottonwood Slough (1862), Boundary (1862), Brockliss No. 1 (1863), Old Virginia (1864), and New Virginia (1876). Many of these ditches were cooperative efforts, and although major ranchers such as the Dangbergs, Dresslers, and Settelmeyers may have controlled the largest interests in each, often several other ranchers with smaller operations would contribute to ditch construction in exchange for a portion of the water supply. As noted above, the construction of irrigation ditches accelerated during the Progressive Era, with new ditches being constructed, and many existing ditches being upgraded, extended, or re-routed. With the establishment of the U.S. Reclamation Service in 1902 and the development of the Truckee-Carson Irrigation Project (also known as the Newlands Project), the federal government moved to adjudicate water rights along the Carson River during the 1910s and 1920s, precipitating a legal battle between the Reclamation Service and the Alpine Land and Reservoir Company, which represented the irrigation interests of a significant percentage of Carson Valley ranchers. The case would not be concluded until 1980. The court proceedings inadvertently provided a wealth of documentation about Carson Valley's irrigation systems and their use between 1913 and 1930.[165]

[165] Achard and Buedel, 67 (initially published in the 1911 State of Nevada Biennial Report of the State Engineer).



Ditch flume over Buckeye Creek in Carson Valley. The flume allows appropriated water from the ditch to flow over the bed of Buckeye Creek, keeping the two waterways separate. This flume is likely for either the Allerman or Lower Old Virginia Canal. No date. Courtesy of Douglas County Historical Society.

By 1913, S.T. Harding, working on behalf of the federal government, had documented the network of irrigation ditches and their existing and recommended future water rights within Carson Valley. Harding recorded a total of 107 diversion ditches (not including pumps) pulling water off of the Carson River and its tributaries in both California and in Nevada above Empire. Of the 80 in Nevada, 78 were in Douglas County, and 2 were in Ormsby County (the Mexican and Lloyd Ditches). These ditches transported water to ranching properties, and allowed for access into the ranch's irrigation network via a headgate or diversion box. Once on a ranching property, a ranch owner might construct smaller ditches called laterals to distribute water throughout his or her field system, and to drain any excess water off the fields and back into the main ditch, stream, or river. Even smaller ditches called furrows would usually provide shallow channels through fields to ensure relatively even distribution of water through the field. Ranchers often spent the first few years of their operations steadily grading their acreage to level it and allow for even distribution of water throughout a field during flood irrigation in the spring.[166]

According to Harding's report, among the largest ditches in the two counties supplying the most acreage were (in order of construction):

Name of Ditch	Year Constructed	Acres (1913)
Henningsen Group	1852	1251

[166] S.T. Harding, "Ditches and Irrigated Areas for Lands of Defendants in *United States v. Alpine Land and Reservoir Co.*, No. D-183, [1913], Subseries 8 (Maps), Robert A. Allen Papers, NC 97, UNR.

Park and Bull	1853	812
Dangberg Home Ranch Ditches	1858	2383
Dangberg System for Klauber and Milk Ranches	1858	1224
Jones-Tucke	1858	849
Boyd and Williams Slough	1859	1118
Dangberg System from Martin/Emigrant Sloughs	1860	2238
Mexican	1860	949
Allerman, Upper/Lower Virginia, Buckeye	1861	7099
Fredericksburg	1864	986
Dressler, Sheele, and Thran	1865	1050

Some ditches did not necessarily water a large amount of acreage, but did include a large number of users, each of whom retained a small interest in water rights for that ditch. Perhaps most indicative of this is the Ezell and McFanning Ditch with diverted water off the Cottonwood Slough, a secondary channel of the Carson River's east fork. Although the ditch only watered approximately 583 acres, dozens of Gardnerville ranchers retained small interests in the structure and diverted water in several places along the ditch's length. In many cases, these irrigation systems are still in use, especially if the fields they supplied historically are still in use for agricultural purposes. Most are also still open-air ditches, although they serve dual purposes as irrigation supply for agricultural activity and as channels for flood diversion. However, in areas nearest post-1940 residential and commercial development, these ditches have either been enclosed and piped through the area below grade, or have been abandoned and demolished.

Registration Requirements

Irrigation features in the study area will generally be eligible for the National Register under Criterion A in the area of Agriculture. They will be significant primarily for their use as critical support systems for Carson and Eagle Valley's agricultural economy over the course of their operation from the 1850s into the present. To be eligible under this Criterion, integrity of location, design, workmanship, and association will be most important. Some irrigation features may be eligible under Criterion C in the area of Engineering for their reflection of important or innovative irrigation engineering in Carson or Eagle Valleys during the nineteenth and twentieth centuries. To be eligible under Criterion C, an irrigation ditch will need a high degree of integrity to its initial construction, as outlined below. Integrity of location, design, workmanship, materials, and association will be necessary for eligibility under Criterion C.

New Virginia Ditch remnant north of Toler Avenue. Nevada SHPO, July 7, 2016.

As linear features, irrigation channels present some challenges for their documentation and nomination to the National Register of Historic Places. In most cases, an irrigation ditch will be classified using NRHP property types as a structure, and should be treated as a single resource from its starting point (diversion off of a main water channel) to its terminus, either in a field or a return into the main water channel. If being nominated to the National Register, the full length of the ditch must be documented. Evaluations for eligibility that may not result in a nomination should still consider the full length of a ditch from diversion to terminus as a single structure, but may document specific elements of the ditch recorded for that effort as "supporting" (i.e., retaining association and integrity to the ditch's historic period) or "non-supporting" (not retaining association and integrity to the ditch's historic period). Although these primary irrigation ditches connected to secondary features such as laterals and furrows on individual Farm/Ranch Complexes, in most cases, those secondary features should not be considered as part of the main ditch, and should be addressed as contributing structures or Historic Associated Features within the respective ranches for which they were built. For those lateral ditches that were built by the same company or cooperative organization that that constructed the main ditch, the lateral should be counted as a separate structure from the main canal or ditch. Although secondary laterals are common in western irrigation projects, especially large-scale undertakings such as the Truckee-Carson Irrigation Project, the use of laterals in Carson and Eagle Valleys appears to be mostly limited to individual ranchers who constructed them to transport water throughout their individual ranches.

The nomination of primary irrigation ditches as structures should include in their documentation the following elements:

- The ditch channel itself, and its embankments to retain water.
- Supporting channel features such as wooden box flumes that allowed for the ditch to travel over steep grades, railroads, roads, or other intervening features. These should be documented as Historic Associated Features.
- Headgates and diversion boxes used to control and divert water off of the main ditch onto specific ranching properties. If dating to the ditch's period of significance and retaining integrity, these elements should be documented as Historic Associated Features.

Because much of the study area remains predominantly agricultural, and these ditches are still in use, efforts to modernize and to increase water use efficiency may have been undertaken. In these cases, the boundary of a nominated ditch will still be the full length of the historic ditch and its right-of-way from its diversion from the stream or river to its terminus or outflow back into the stream or river. However, a nomination should document which segments of the ditch are "supporting" and which are "non-supporting." Common modifications that might render a ditch segment "non-supporting" include enclosure into a pipe (either exposed or buried), and replacement of features along a segment such as concrete and wood or metal diversion boxes and headgates with modern materials. The addition of a concrete trough under a historic ditch channel may not render a segment non-supporting if the new concrete lining retains the historic dimensions of the un-lined irrigation ditch. In cases where there has been significant and extended loss of integrity along a particular section of an irrigation feature, a discontiguous nomination of the single structure may be made. For example, if a 2-mile, open-air ditch remains largely intact, including its diversion dam, primary channel, and outflow, but a segment of ½ a mile has been enclosed and buried underneath intervening residential development, the ½ mile enclosed segment may be excluded from the nominated boundary, with the two segments above and below that area nominated as a single, albeit discontiguous, structure.

Aspects of historic integrity for a significant irrigation ditch are outlined below:

1. Location – Integrity of location for individually significant irrigation features is critically important for any ditch or canal. It should be expected that the original channel for an irrigation feature may have been moved, modified, or upgraded over time which, if those modifications occurred during the period of significance, will not have an adverse effect on integrity. If nominated under Criterion C, modifications to route will not have an adverse effect if those modifications are associated with the engineering significance of the feature.

2. Design – Irrigation features must have strong integrity of design to be eligible under any Criteria. Integrity of design will pertain to the overall channel depth, channel width, rhythm of turnouts or head-gates, and the diversion dam that funnels water into the channel. If the majority of these features are intact, an irrigation feature will have integrity of design.

3. Workmanship – Irrigation features should have good integrity of workmanship to be eligible under Criterion A. Prior to 1940, most irrigation features were constructed of soil using wagon teams with plowing sleds or by hand, with diversion boxes, flumes, and head-gates constructed of wood. Good integrity in this aspect includes these features generally being recognizable, although a lining of a channel with concrete, or the upgrading of existing diversion features with concrete rather than wood may be acceptable. To be eligible under Criterion C, integrity of workmanship should be strong, with the original workings still in place, including a predominantly soil channel with most original diversion features still present in their historic configuration.

4. Materials – Irrigation features should have good integrity of materials to be eligible under Criterion A, including raised soil embankments, and concrete or wood diversion features. Upgrades or modifications over time are expected as most existing irrigation channels in Carson and Eagle Valley are still in use for their historic purpose. In this case, upgrades of equipment such as diversion boxes and head-gates, or the addition of concrete lining to a ditch, may not adversely affect the integrity of the channel if integrity of location and design are strong. Under Criterion C, the irrigation feature should have strong integrity to its initial, or historically significant, period of construction or modification. Head-gates, channels, and

diversion boxes should mostly retain their historic materials, including wooden gates and boxes, dirt-lined channels, and perhaps concrete features depending on the year of construction or modification.

5. Setting – To be eligible under any Criteria, an irrigation feature should have good integrity of setting. In general, as long as the majority of the irrigation channel remains in an agricultural setting, it will retain integrity in this aspect. Segments of a channel that are surrounded by urban or suburban development may still be "supporting" if it has strong integrity in location, design, and materials.

6. Association – To be eligible under any Criteria, an irrigation feature should have strong integrity of association to its historic period as an agricultural support system. An irrigation feature will generally have strong integrity of association if it has strong integrity of location and design, and still provides water to most of the historic properties for which it was constructed historically.

7. Feeling – Integrity of feeling under any Criteria will be closely linked to the integrity of design, setting, and association. In general, an irrigation feature will retain integrity of feeling if the sum of its parts generally evokes the history of agriculture and irrigation development during the nineteenth and/or twentieth centuries.

Associated Property Type: Agricultural Processing/Storage Building

Important to the agricultural development of Carson and Eagle Valleys were a relatively small number of processing and storage buildings that supported local farmers and ranchers. The local demand that sustained farms since settlement in the 1850s, and the relative distance between markets in the Great Basin, made local processing important. Furthermore, local processing allowed for the marketing of Carson and Eagle Valley produce such as cheese and butter far outside of northwest Nevada, most notably with the success of Carson Valley butter in northern California markets by the 1890s. Although never as widespread as larger agricultural areas, several mills, warehouses, and creameries developed in the area, mostly concentrated in Carson Valley, and mostly operated independently or cooperatively by local farmers and ranchers. However, a small number responded to increased processing and storing demands by the late-nineteenth century, and were constructed as cooperatives or corporate endeavors in area communities, chiefly Gardnerville and Minden. These buildings provided access to light processing, both to satisfy the relatively small local demand for dairy products and processed grains, but also an opportunity to diversify branding and marketing outside of the region. Some of these facilities were part of private ranching complexes, and in that case, should generally be treated as contributing buildings in a larger Farm/Ranch Complex. However, larger examples that retain strong integrity may be eligible individually, such as the Douglas County Creamery, or the Minden Flour Mill (listed in the National Register in 1978; NRIS #78001721).

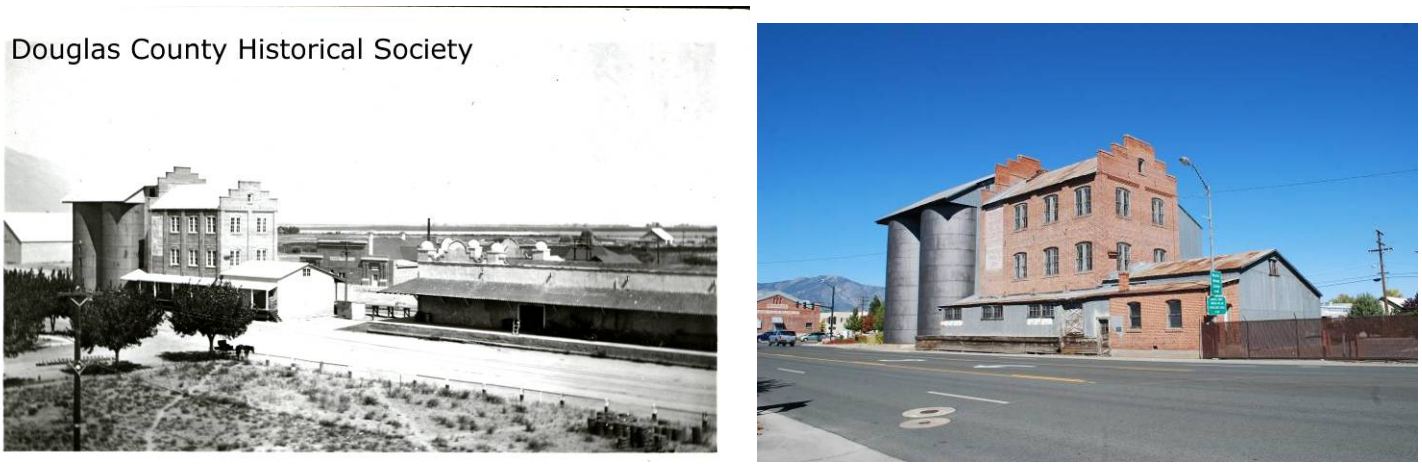
Dairy processing facilities, dominated by creameries, are among the most important of Carson and Eagle Valley's agricultural industrial buildings. Several creameries were established in Carson Valley during its dairying boom years from the 1890s forward to the 1940s, of which three are known to still exist at the time of drafting this document: the Douglas Valley Creamery on the Henningsen Ranch, the second Minden Butter Manufacturing Company building, constructed in 1916 near the Minden Flour Milling Company, and the Lampe Ranch creamery, a much smaller operation than the other two on the southeast end of Gardnerville. Various creameries had been constructed throughout the valley, including the Carson Valley Creamery on the Dangberg Home Ranch. In Minden, the Minden Butter Manufacturing Company was first built in 1908 as a wooden frame building to process and store dairy products near the railroad terminus. The first plant had two vats for separating cream and milk, each with a 600-gallon capacity. The facility boasted all electrical equipment, including cooling coils, churns, and dehydrators. Early on, the company sold butter under the brand name "New Holland Process." By June of 1915, the daily production of the creamery had exceeded 30,000 pounds per month, and it became evident that a larger facility was needed to process the tremendous volume. Edwin Millar leased the livery in downtown Minden, then owned by the Dangberg Company, to operate as a dairy into the 1920s, providing milk for a local market. The Dangberg Company sought to expand its own creamery operations for markets farther afield, contracting with famed Nevada architect Frederic J. DeLongchamps to design a new brick facility with more floor space and upgraded equipment, completed in 1916 as the Minden Butter Manufacturing Company (NRIS #86002263). With poultry becoming increasingly important, in 1927 a new building was constructed west of the Butter Manufacturing Company to house an egg plant and cold storage building, for use by the Carson Valley Poultry Association. The demand for dairy and egg products from the valley, mainly for Lake Tahoe markets, became so great that an expansion was added in 1942 that joined the main building to the egg and cold storage facility (see Map 12).[167]

With hay and grain farming being a quick addition to the agricultural landscape of the valleys by the 1850s, grain and flour milling quickly became a prominent part of area towns. Millwright Thomas J. Knott constructed the area's first mill in Genoa in 1854 for John Reese, situated on Mill Street. This was followed around 1857 or 1858 with a flour mill for Hiram Mott just north of Mottsville and constructed by millwright Sam Silliman. In

[167] Maule, 89-91, 98.

1865, William M. Cary acquired the Genoa mill and moved it to the foot of Kingsbury Grade. It operated under various ownership, including Robert Falcke under the name Farmer's Mill, until at least the early 1900s. Most of these early mills used stone grinders, many of which were shipped in from California. The Reese Mill in Genoa was operated with two buhr stones, referred to as a run of buhrs. The bottom buhr was stationary while the top buhr turned. They were about five feet in diameter and ten to twelve inches thick. The stone was a cream-colored knotty porous quartz. The stones usually came in fifty or sixty pound sections and were fit together at the mill site similar to keystones.[168]

In 1895, the Douglas Flour Mill was constructed along Long Valley Creek just above where it flows into the East Fork of the Carson River. The Douglas Mill was a three-story structure with equipment that weighed thirty thousand pounds. The mill operated until 1912 when J.N. Anderson and Fred W. Sarman established a new mill in Gardnerville and removed the machinery from the Douglas Mill. In 1900, William F. Dressler and Henry and H.H. Beck established the Eagle Roller Mill Company, establishing a mill north of Genoa on Adams Creek. In 1906, William F. Dressler, Henry F. Dangberg, Jr., Richard Bassman, H.H. Springmeyer, and C.M. Henningsen incorporated the Minden Flour Milling Company, which became the largest of all the mills established in Carson Valley. In its first years, the Minden Flour Milling Company used horse teams to transport flour to markets in Mono County, California, but steadily enhanced marketing in the early twentieth century, and access to the railroad that now reached Minden, meant that demand increased. By the mid-1920s, the company used trucks to transport flour to Mono County, still its principal market. In 1927, chicken feed processing equipment was added to the mill. It was converted to a feed mill around 1937 under the direction of Frank Reed. By 1956, modern feed mixers, a pellet mill, a molasses mixer, cleaners, and grinders were installed in the mill to produce livestock feed. The mill closed operations in the late 1960s, and was purchased by Bently Nevada, Inc. in 1975; it still stands at Railroad Avenue and Sixth Street in Minden. As of the drafting of this MPDF, Bently Enterprises was completing a major rehabilitation of the mill into a new business space for downtown Minden.[169]



Minden Flour Milling Co., shown at left, 1908 (Courtesy of Douglas County Historical Society), and at right in 2014 before rehabilitation began (NVSHPO, 2014).

Warehousing was equally important to the agricultural industry along the Carson River. With Minden becoming a railroad terminus and the economic center of Carson Valley by 1906, the need for a warehouse near the railroad depot became apparent. The Meyers Mercantile Company building near the Minden Flour Milling Company, and an extension from the company's home store in Carson City, was constructed in 1907, fast

[168] Dangberg, *Carson Valley*, 48-51.
[169] Dangberg, *Carson Valley*, 48-51; Maule, 83-85.

becoming the valley's primary freight depot, warehousing finished agricultural goods and being the loading point for freight trains that entered the valley. The building changed ownership several times until several farmers formed the Farmer's Cooperative Mercantile Company, operated by Nelson and Henry Mack. The store burned down in 1926, eventually to be replaced by a new building on the same site. Alongside the Mercantile, several large farmers and ranchers, led by the Dangberg Company, constructed the Carson Valley Hay and Produce Company to serve as an extension of the warehousing at the Mercantile. Finished in 1909, the barn was 208 feet long and 70 feet wide, constructed of Oregon pine, being one of the larger barns in Nevada. It was large enough that a spur of the Virginia & Truckee Railroad was built through the barn to provide for easier loading and unloading. However, a strong wind blew down the barn in 1923, and it was never rebuilt. Adding to the warehousing facilities in downtown Minden was the Minden Wool Warehouse, constructed in 1916 to house wool on its upper levels and potatoes on its lower levels. It served in this capacity until the 1940s, when Nevada's potato industry succumbed to larger national producers in other regions, and was converted fully to offices by the 1960s. It stands as one of the only examples of a warehousing building remaining in the study area.[170]

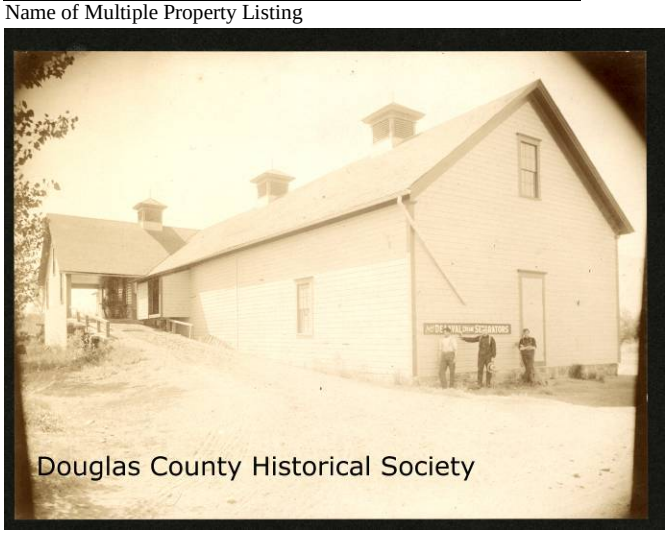
Registration Requirements

Agricultural Processing/Storage Buildings will generally be eligible under Criterion A in the areas of *Agriculture* and *Industry* for their association with the processing and storing of agricultural products in the study area. Because these properties are almost exclusively agricultural in nature, were relatively small in number, and owned privately or cooperatively by area ranchers, they should be evaluated and/or nominated under both areas of significance. Because of the relatively small number of facilities established in the study area and their importance to maintaining the agriculture of the area, it is highly likely that preserved examples of Agricultural Processing/Storage Buildings will be eligible under Criterion A if they retain sufficient integrity.

Considering that many of these properties represent significant achievements by renowned local ranchers, it is likely that they may possess significance under Criterion B as well. If representing a well-preserved example of a the property type, such as a mill, creamery, or warehouse, a property may be eligible under Criterion C in the area of *Architecture* if it retains strong architectural integrity to its original design and construction and retains the significant portions of its processing facilities. Sites associated with agricultural processing or storage may be significant under Criterion D for their ability to provide information about the industrial heritage of Carson and Eagle Valleys, especially those sites that address the research questions established above in Section F.

To retain integrity, Agricultural Processing/Warehousing Buildings should possess the key features pertaining to their storage or processing history. To demonstrate strong integrity for this property type, mills and creameries should retain strong integrity of location, design, materials, and workmanship. They should retain all or most of their processing areas, including grain bins, storage tanks, milling/separating areas, etc. Warehouses should generally possess the open space and general floorplan that existed during their period of significance.

[170] Maule, 86-87, 106-107, 126.



Left: Douglas County Creamery on the Henningsen Ranch in Waterloo, September 10, 1908 (Courtesy of Douglas County Historical Society); Right: The Douglas County Creamery today (Nevada SHPO, July 7, 2016).

G. Geographical Data

This Multiple Property Documentation Form corresponds to the upper Carson River watershed in both Douglas and Carson Counties in Nevada. Although the context included in this MPDF touches on resources in California and Nevada's Smith and Mason Valleys due to necessity, the bulk of resources related to this context are found in Nevada in Douglas County and Carson City, concentrated around the communities of Genoa, Gardnerville, Minden, Sheridan, Mottsville, and Carson City. Historical communities such as Centerville, Waterloo, Fairview, Empire, and Lakeview are referenced in this document and remain as landmark communities today, although their governance is provided by either Carson City or Douglas County. The Tahoe Basin, including communities such as Glenbrook, at one point provided summer pasture for many of the cattle and sheep operations in Carson Valley, but due to the Basin's development into a predominantly outdoor tourism-focused area, the Basin is not included in this study area. Also, although Carson and Eagle Valley ranchers frequently drove their livestock throughout the region during the year, from as far west as western Alpine County, California, to as far east as Mason Valley in Lyon County, Nevada, their bases of operations remained in the Carson River watershed in Douglas County and Carson City, thus providing the boundary for this study area. Also, for the purposes of this study, Jack's Valley, sometimes referred to as a separate geographic feature, has been considered part of Carson Valley.

H. Summary of Identification and Evaluation Methods

This MPDF was completed in response to several requests for nominations to the National Register of Historic Places by ranch owners, predominantly in Carson Valley. Staff of the Nevada SHPO produced this document in an effort to reduce the time necessary to complete nominations, and to provide a synthesis of the region's history as one of Nevada's earliest agricultural centers. The SHPO hopes that this document will promote and provide access to the National Register for more historic ranch owners within the study area.

Both Jim Bertolini (Historian) and Kristen Brown (Architectural Historian) of the NVSHPO conducted a reconnaissance-level survey of ranches in the study area in July of 2016, with some spot follow-up in December of 2016 as previously unknown ranches were discovered, or critical areas could be re-photographed without tree cover. Prior to field work, the team used aerial imagery of the study area along with historical records to map expected historic ranch sites throughout the valley. During field survey, sites that were observed in the field that were missed by the aerial survey were added to the data-set, which recorded a total of 94Farm/Ranch Complexes, as well as a small number of isolated agriculturally-related resources such as irrigation features and agricultural industrial buildings. In every case, photographs and geographic location were recorded for each resource or Farm/Ranch Complex. In most cases, intensive research about individual Farm/Ranch Complexes was not undertaken unless that ranch presented itself as particularly important to the production of the context, such as those owned by key individuals such as the Dangbergs, Dresslers, Settelmeyers, and Springmeyers, or if a unique opportunity to address sites significant under Ethnic Heritage presented itself, such as the three African American-owned ranches in Sheridan. Beyond a near-exhaustive review of the secondary literature for agriculture in the region, primary sources were accessed at both the Douglas County Historical Society archives, and the University of Nevada, Reno's University Archives and Special Collections. Research emphasis within these collections was given to regional collections, or primary sources that addressed ranches being considered or nominated under this MPDF, such as William Lampe's ranch south of Gardnerville and Louis Stodieck's ranch south of Minden. Robert A. Allen's Papers at UNR proved especially helpful in reconstructing Carson Valley's agricultural landscape in the early twentieth century.

The historic context was largely in response to citizen and property owner interest in nominating places in Carson Valley to the National Register. It was also influenced by the importance of Carson Valley to Nevada's foundation as a state, and by the importance of Carson Valley, and to a lesser extent Eagle Valley, to the state's agricultural history. This combination of factors compelled the Nevada SHPO to take on this project in-house for what was perceived to be a long-term benefit to the state's preservation network. The SHPO would also like to acknowledge the peer review support of Drs. Jonathan Foster (Great Basin Community College) and Leisl Carr-Childers (University of Northern Iowa), as well as ZoAnn Campana (Kautz Environmental Consultants). Darrel Cruz (Washoe Tribal Historic Preservation Officer), Dr. Dana Bennett (Nevada Mining Association), Geralda Miller (historian), and Paul Oatman (structural engineer) also provided important research assistance on various topics within the context.

Property types above were selected based on their expected path to the National Register, rather than strict architectural classification. The Farm/Ranch Complex was and is the fundamental unit of historic ranches in the study area, and so received the most attention. Ancillary buildings and structures were generally considered to be ineligible for individual listing in the National Register, and are detailed under Farm/Ranch Complexes as they are expected to be historic as contributing elements in Farm/Ranch Complexes, rather than on their own. The requirements for registration and integrity were based on observations in the field. The project team observed a number of ranches with either significant alterations or modern additions, as well as a surprisingly high number of what appeared to be intact complexes. Furthermore, development pressure threatens additional

ranches in the study area, especially in Carson City/Eagle Valley. As a means of encouraging the recognition and preservation of these places, registration requirements focus on association of a property to the overall context of agriculture, and how well the ranch reflects that historic period.

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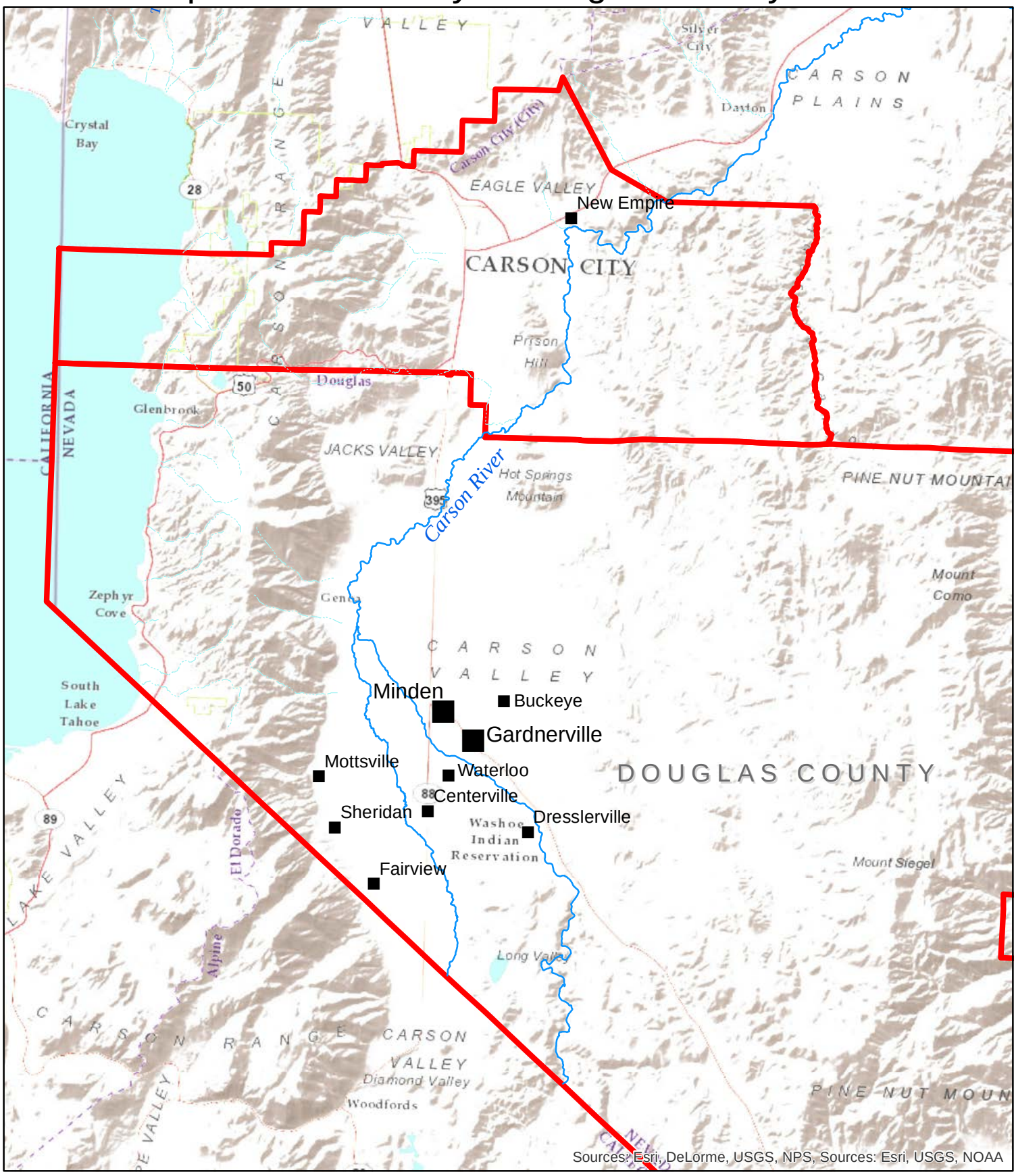
Agriculture on the Carson River
Map 1 - Carson City & Douglas County



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Source: NAIP 2015

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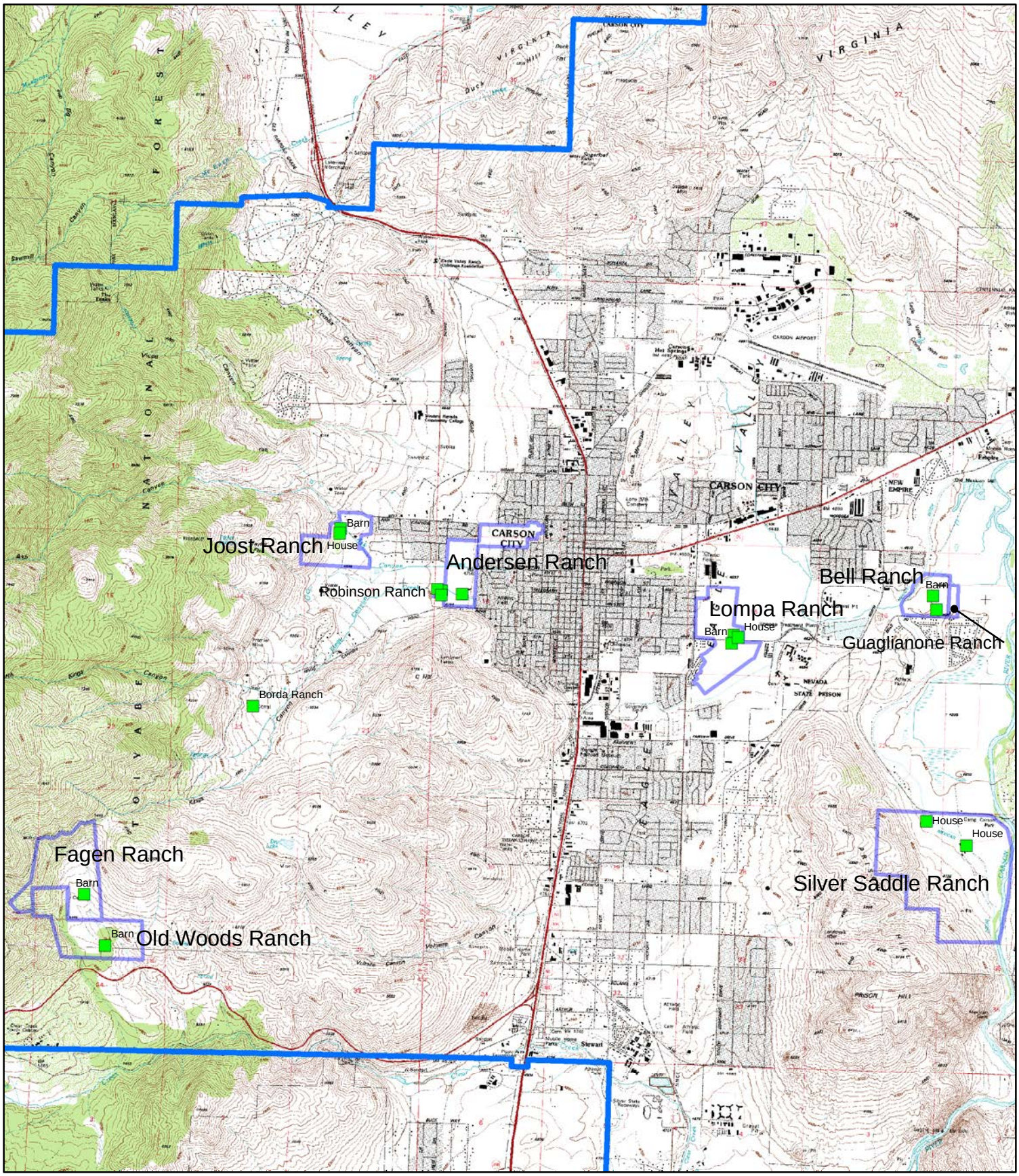
Agriculture on the Carson River
Map 2 - Carson City and New Empire Area Ranches



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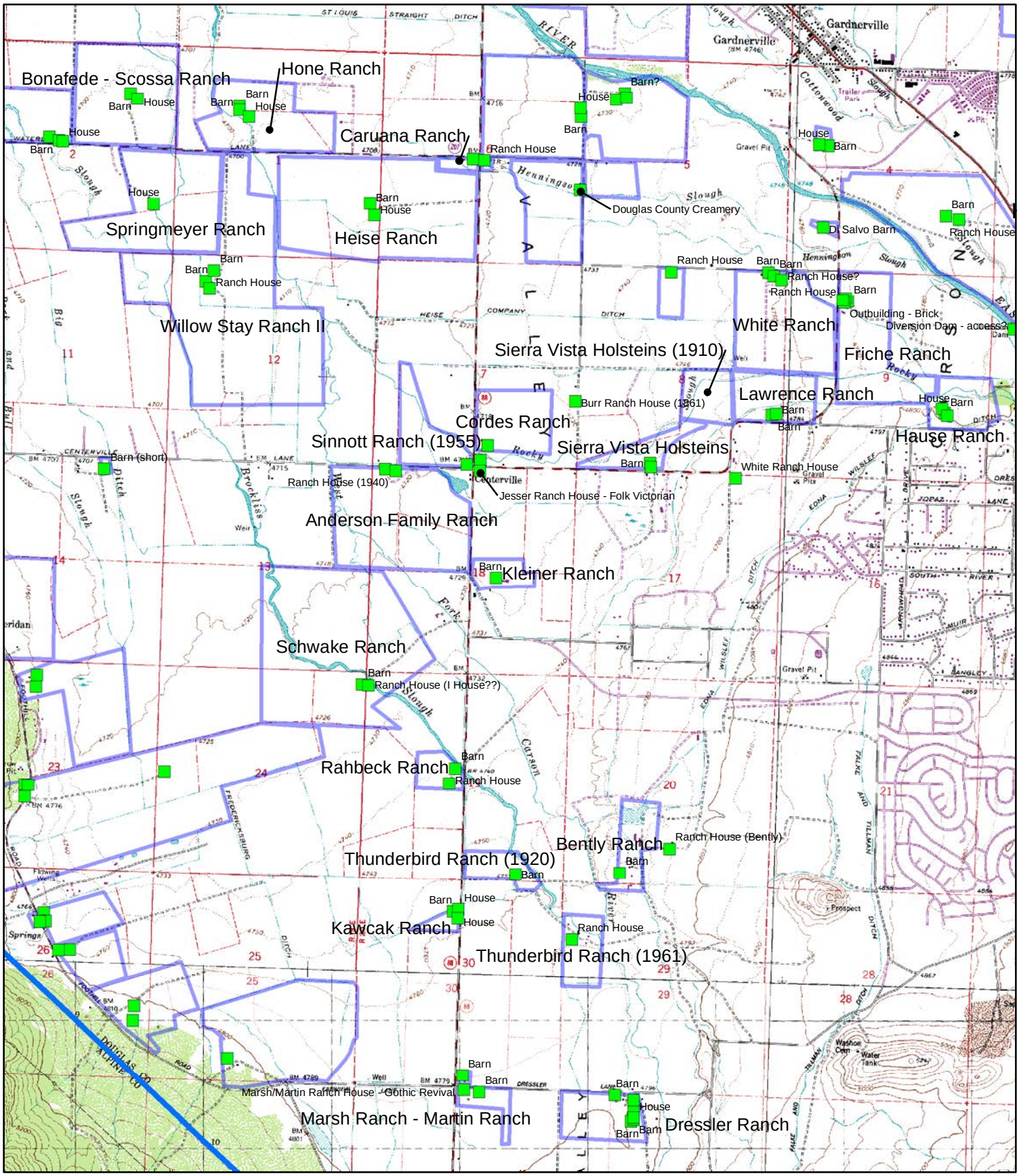
Agriculture on the Carson River
Map 3 - Centerville Area Ranches



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Source: USGS; NVSHPO

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Miles

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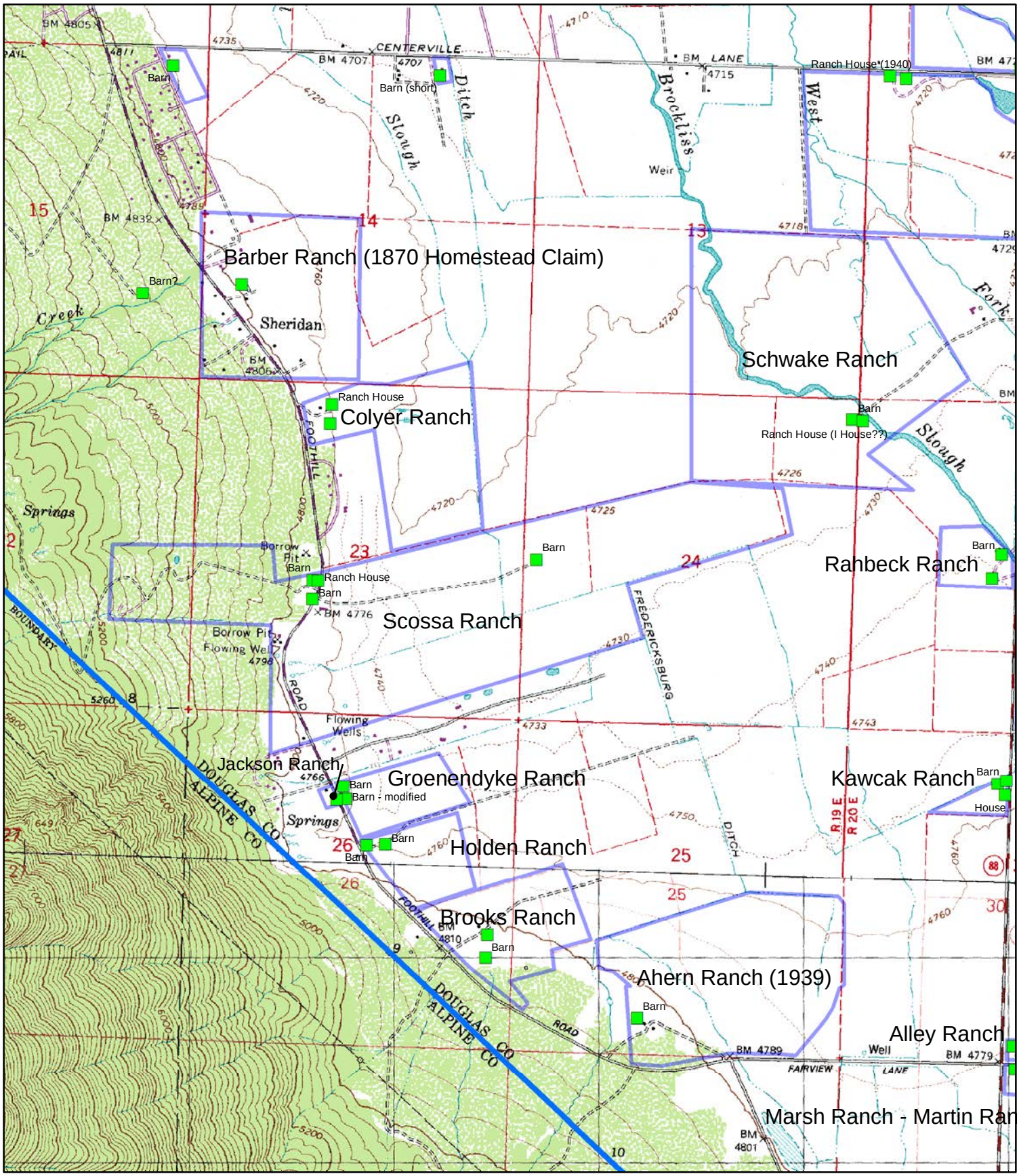
Agriculture on the Carson River
Map 4 - Sheridan Area Ranches



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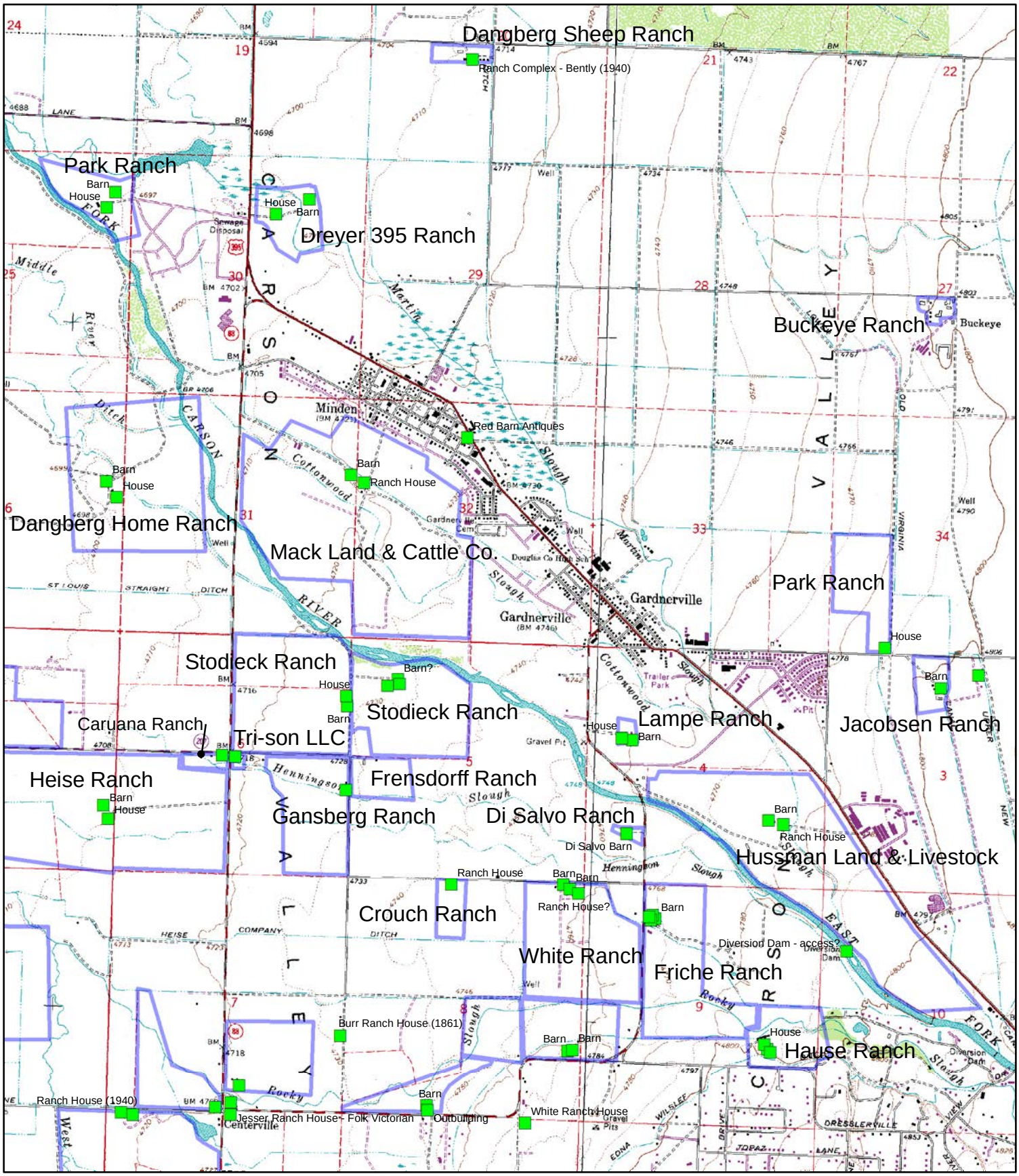
Agriculture on the Carson River
Map 5 - Minden & Gardnerville Area Ranches



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Date: 3-7-2017
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Projection: UTM Zone 11 North
Source: USGS; NVSHPO

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Miles

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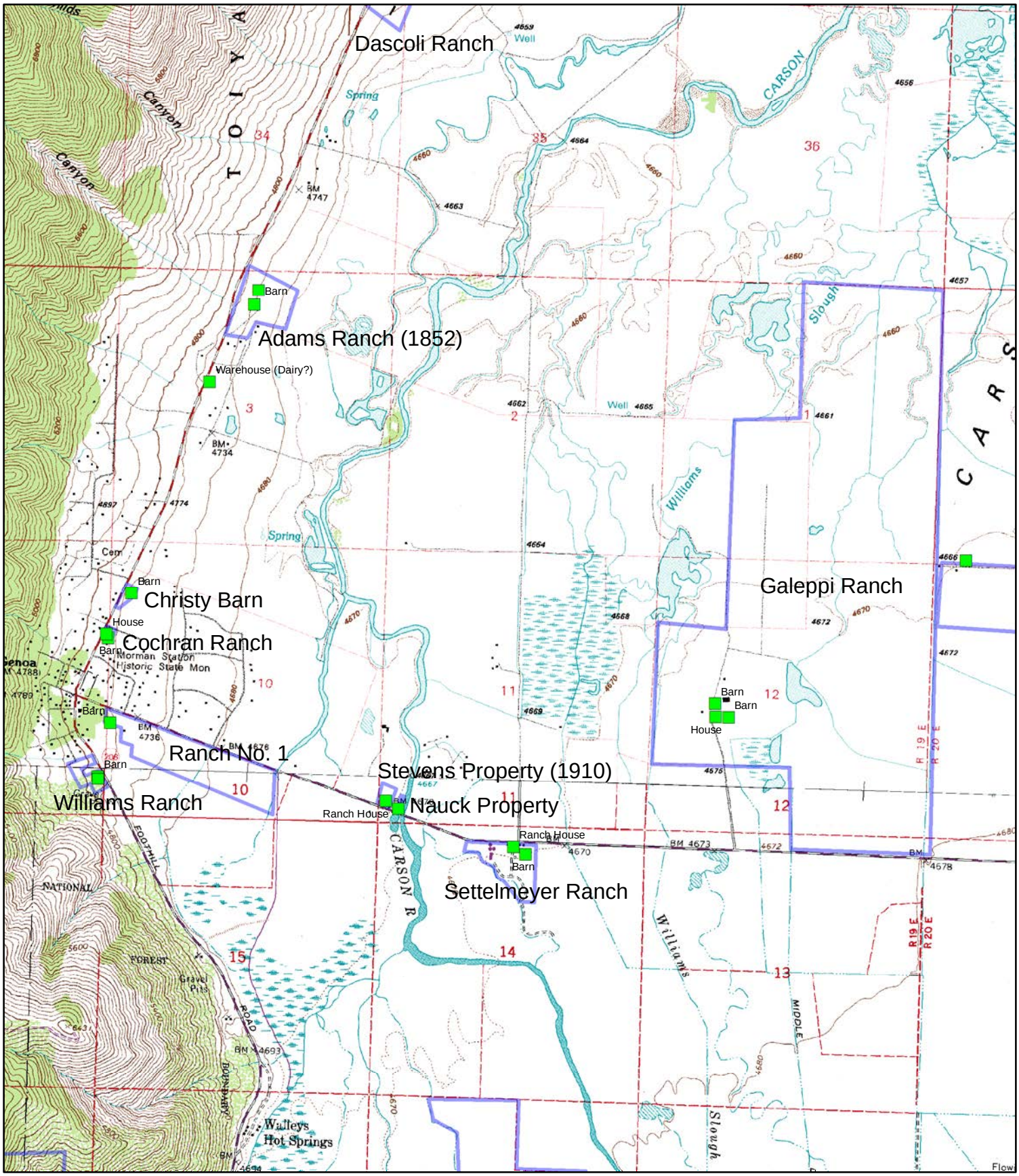
Agriculture on the Carson River
Map 6 - Genoa Area Ranches



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Source: USGS; NVSHPO

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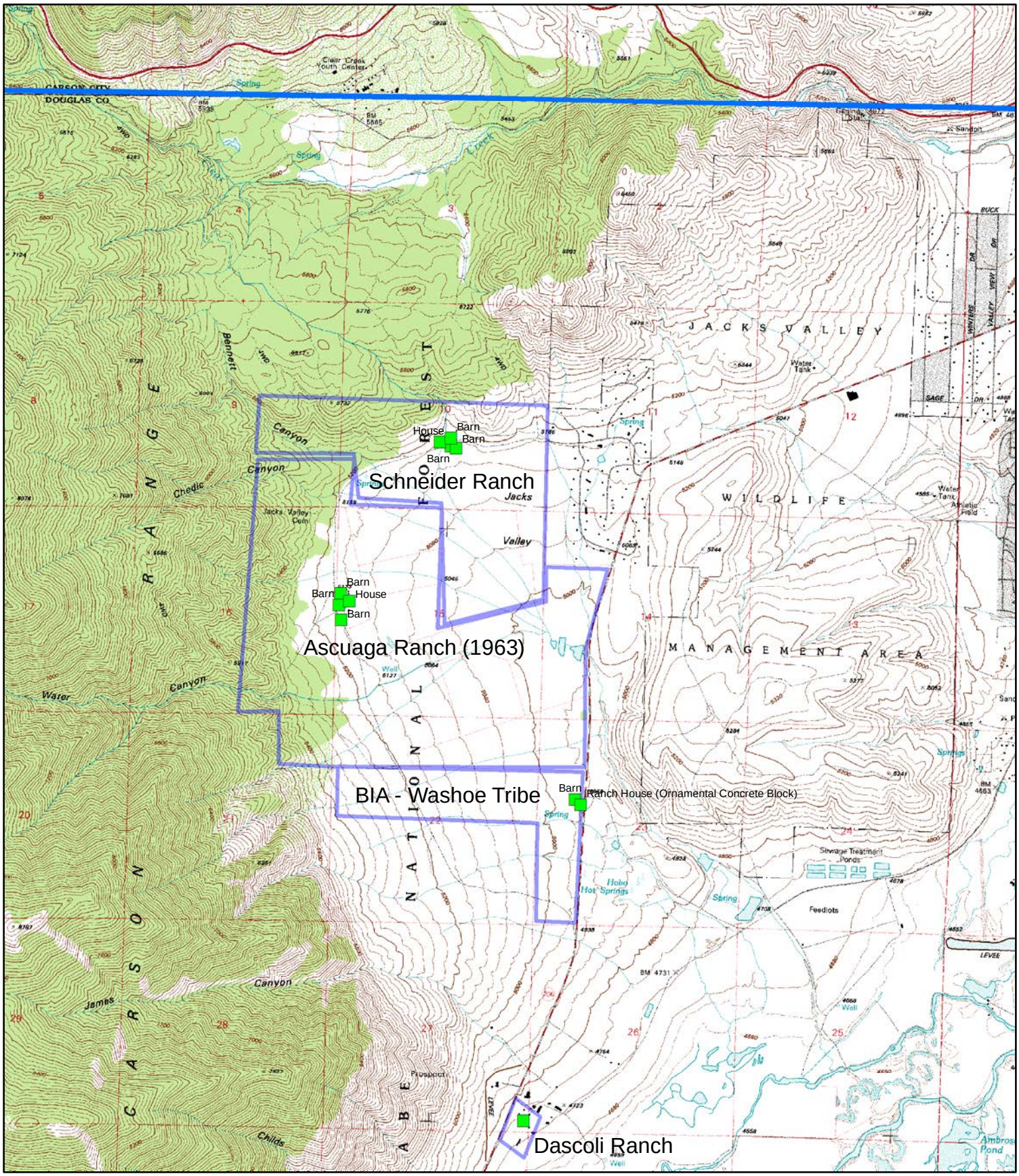
Agriculture on the Carson River
Map 7 - Jack's Valley Area Ranches



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Date: 3-7-2017
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Source: USGS; NVSHPO

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Miles

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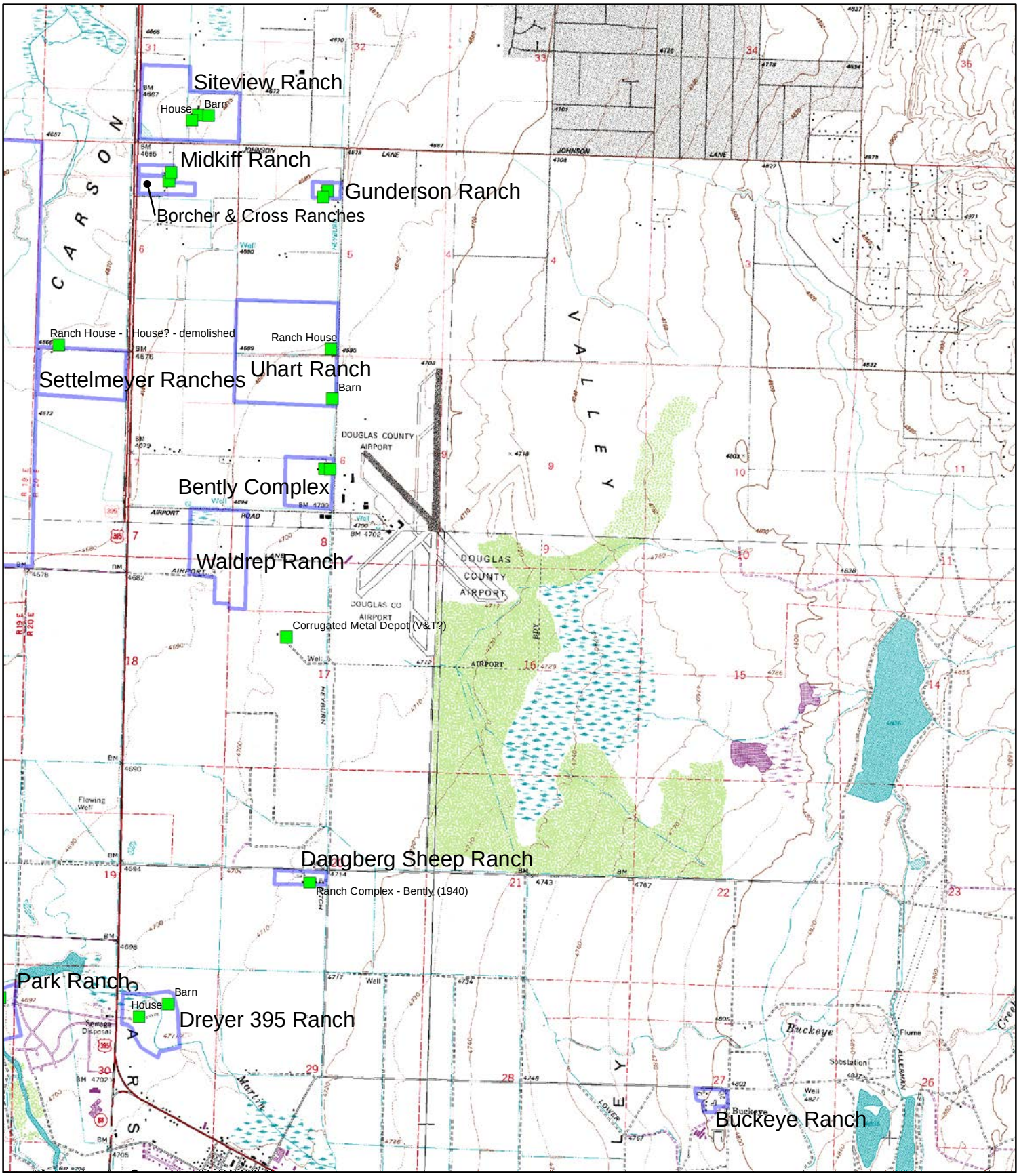
Agriculture on the Carson River
Map 8 - Johnson Lane & Buckeye Area Ranches



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Source: USGS; NVSHPO

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Miles

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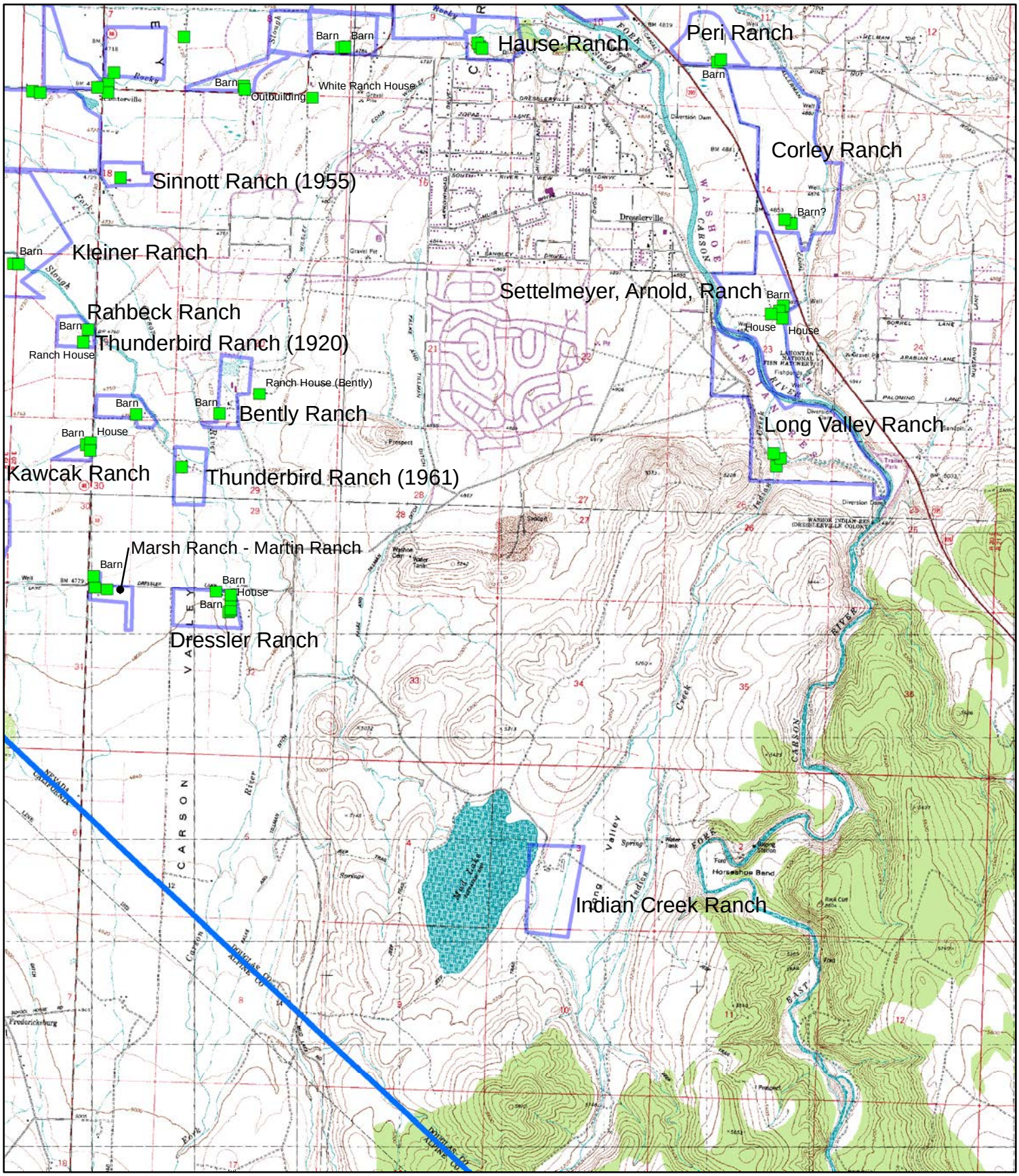
Agriculture on the Carson River
Map 9 - Long Valley & Dresslerville Area Ranches



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Miles

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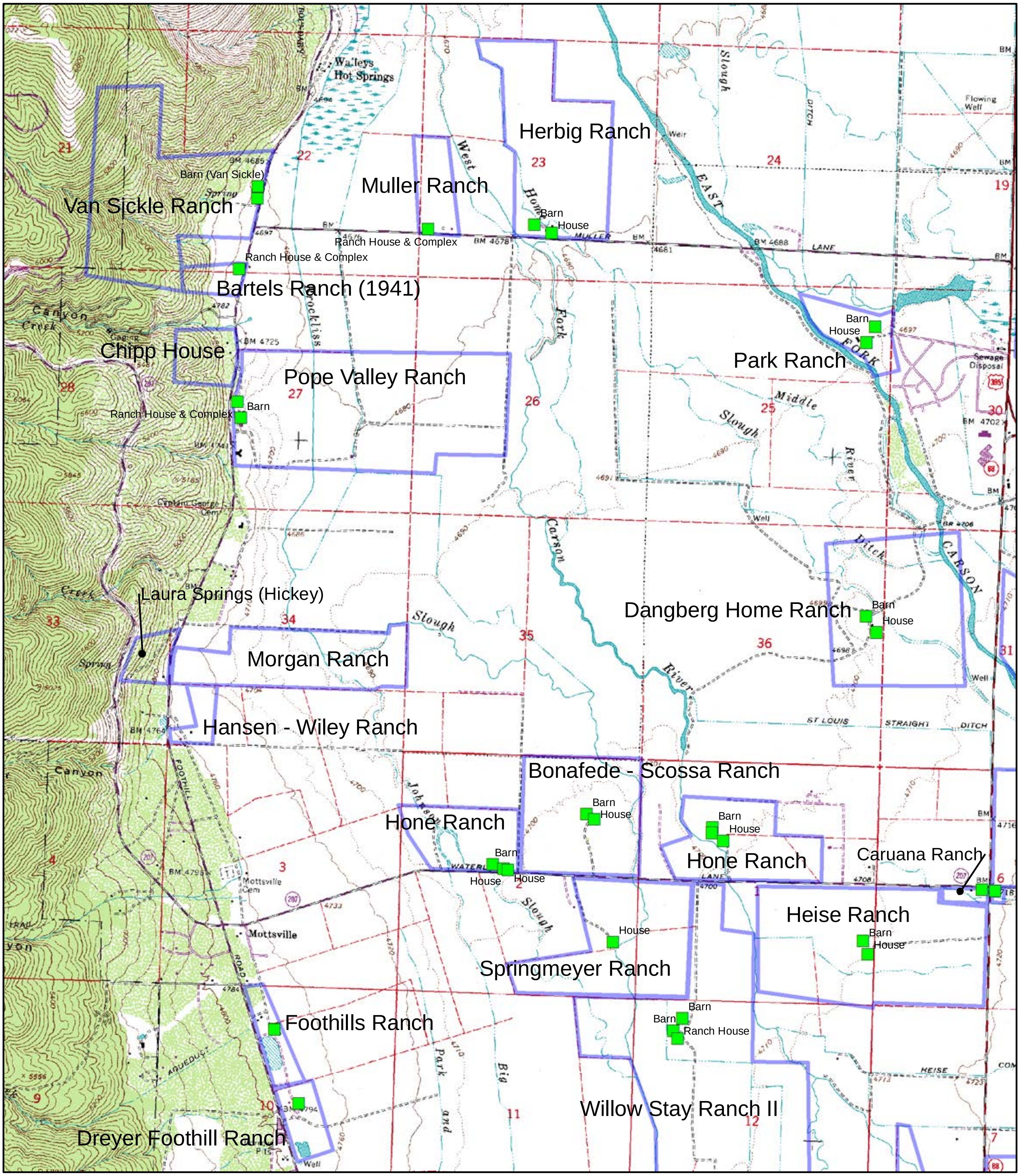
Agriculture on the Carson River
Map 10 - Mottsville Area Ranches



Author: NVSHPO (Bertolini)
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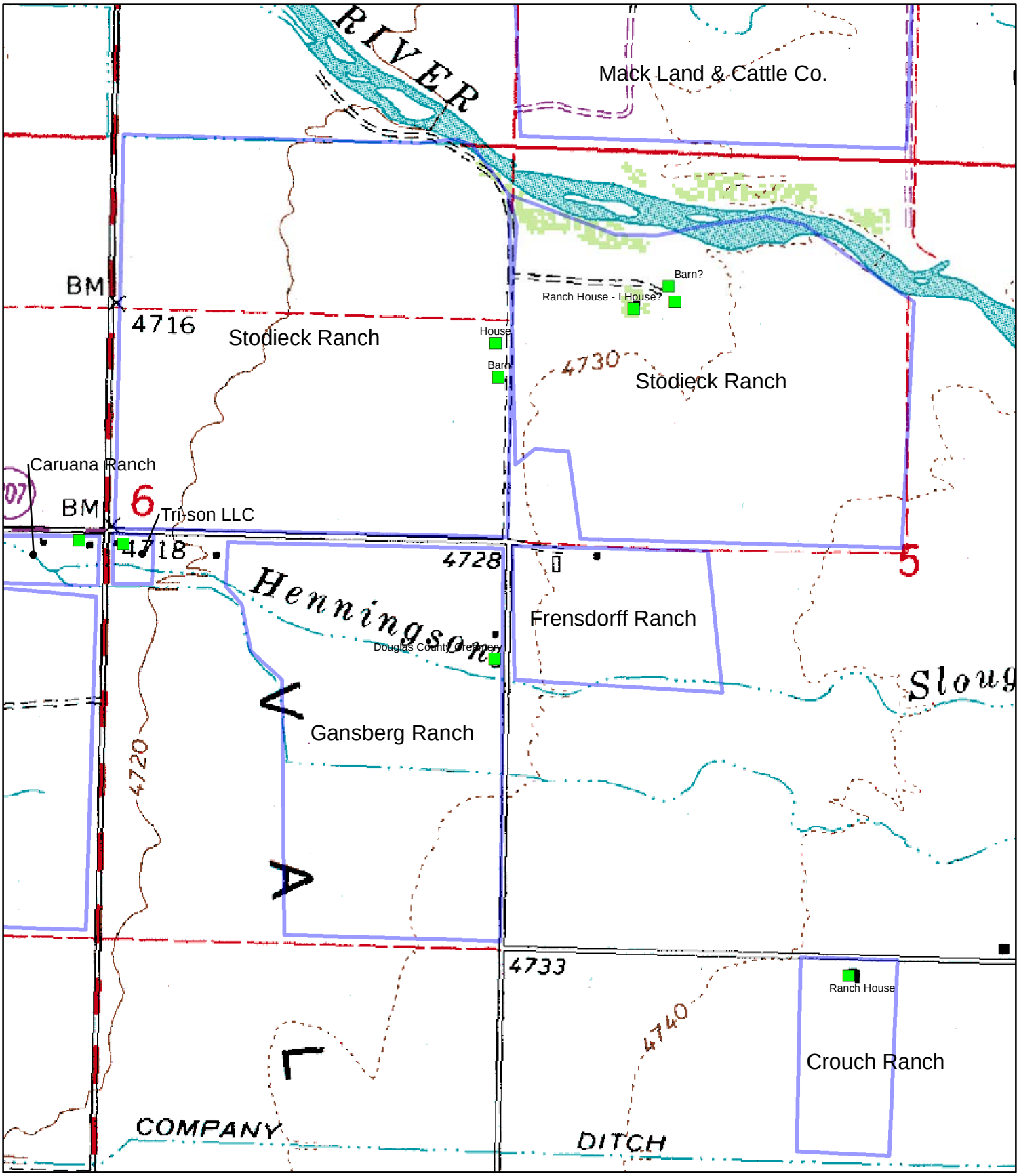
Agriculture on the Carson River
Map 11 - Waterloo Area Ranches



Author: NVSHPO (Bertolini)
Date: 3-7-2017
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Source: USGS; NVSHPO

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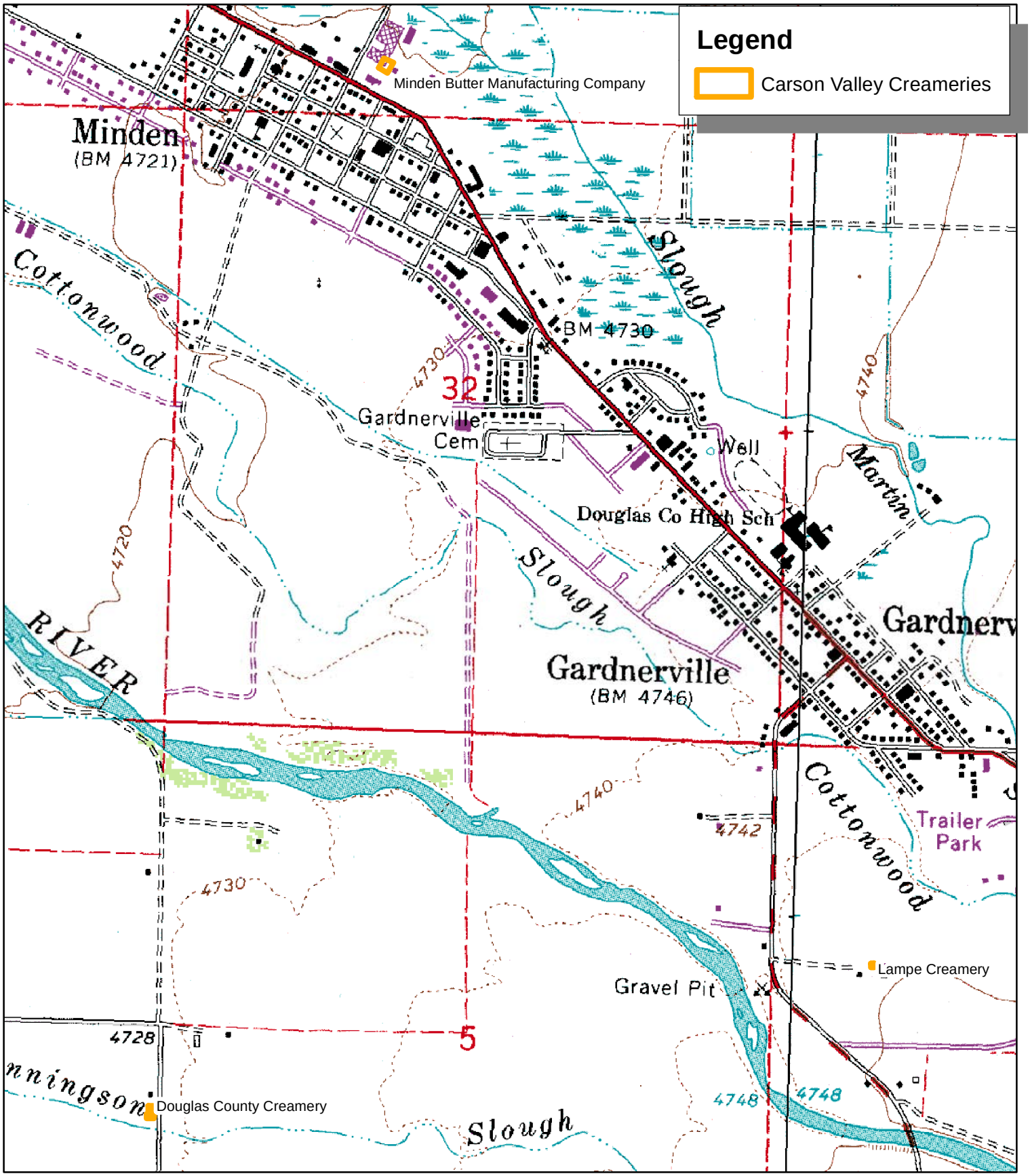
Agriculture on the Carson River
Map 12 - Carson Valley Creameries



Author: NVSHPO (Bertolini)
Date: 12-6-2017
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Source: USGS; NVSHPO

0 0.25 0.5 1 Miles

N

National Register of Historic Places
Memo to File

Correspondence

The Correspondence consists of communications from (and possibly to) the nominating authority, notes from the staff of the National Register of Historic Places, and/or other material the National Register of Historic Places received associated with the property.
Correspondence may also include information from other sources, drafts of the nomination, letters of support or objection, memorandums, and ephemera which document the efforts to recognize the property.

NEVADA
STATE HISTORIC PRESERVATION OFFICE

Department of Conservation and Natural Resources
Brian Sandoval, Governor
Bradley Crowell, Director
Rebecca L. Palmer, Administrator, SHPO

July 21, 2017

Barbara Wyatt, ASLA
National Register/NHL Programs
National Park Service
1201 Eye Street NW
Washington, DC 20005

RE: **Multiple Property Documentation Form – Agriculture on the Carson River in Douglas & Ormsby Counties; and accompanying National Register Nomination for the Wilhelm Lampe Ranch, Gardnerville, Douglas County, Nevada**

Ms. Wyatt,

The enclosed 2 disks contain the true and correct copies of the Multiple Property Documentation Form – *Agriculture on the Carson River in Douglas & Ormsby Counties*; and the accompanying nomination submitted under that MPDF, for the Wilhelm Lampe Ranch, in Gardnerville, Douglas County, Nevada, to the National Register of Historic Places. Disk 1 includes the MPDF, the individual nomination form, related correspondence, and GIS data related to the Lampe Ranch. Photographs for the nominated property are included on disk 2.

If you have any questions about the nomination, please contact Jim Bertolini, National Register Coordinator, at (775) 684-3436 or jbertolini@shpo.nv.gov

Sincerely,

Rebecca Palmer

Rebecca Palmer
State Historic Preservation Officer
Nevada SHPO
(775) 684-3443
rlpalmer@shpo.nv.gov

NPS Form 10-900-b

Mc-1619

OMB No. 1024-0018

United States Department of the Interior
National Park Service

National Register of Historic Places Multiple Property Documentation Form

This form is used for documenting property groups relating to one or several historic contexts. See instructions in National Register Bulletin *How to Complete the Multiple Property Documentation Form* (formerly 16B). Complete each item by entering the requested information.

___X___ New Submission _____ Amended Submission

A. Name of Multiple Property Listing

Agriculture on the Carson River in Nevada's Douglas and Ormsby Counties

B. Associated Historic Contexts

Agriculture on the Carson River in Douglas and Ormsby/Carson Counties, 1850 – 1980
Barn Architecture in Carson and Eagle Valleys, 1850-1950

C. Form Prepared by:

name/title: Jim Bertolini, National Register Coordinator
organization: Nevada State Historic Preservation Office
street & number: 901 S. Stewart St., Ste. 5004
city or town: Carson City state: NV zip code: 89703
e-mail: jbertolini@shpo.nv.gov
telephone: 775-684-3436 date: July 17, 2017

D. Certification

As the designated authority under the National Historic Preservation Act of 1966, as amended, I hereby certify that this documentation form meets the National Register documentation standards and sets forth requirements for the listing of related properties consistent with the National Register criteria. This submission meets the procedural and professional requirements set forth in 36 CFR 60 and the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation.

Rebecca Palmer — Nevada State Historic Preservation Officer — July 21, 2017
Signature of certifying official — Title — Date

Nevada State Historic Preservation Office
State or Federal Agency or Tribal government

I hereby certify that this multiple property documentation form has been approved by the National Register as a basis for evaluating related properties for listing in the National Register.

_____ _____
Signature of the Keeper — Date of Action

United States Department of the Interior
National Park Service

Agriculture on the Upper Carson River in Nevada — Nevada
Name of Multiple Property Listing — State

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E. Statement of Historic Contexts

One of the most endemic, if romanticized, components of the western American landscape is the ranch. Ranching sat alongside mining and gambling as one of the most recognizable aspects of the Nevada's economic development and heritage. In the corridors along early overland transportation routes established in the 1850s, ranching was frequently the first industry to take root, with ranchers squatting on land occupied by native people including the Washoe, Numu, and Newe. Ignoring native claims to the territory, new settlers adopted a land use doctrine described by Nevada historian James Hulse as an alodial system in which those who used the land (in a manner consistent with Euro-American land use practices) laid claim to it, regardless of patents or agreements from a government authority. Such a strategy allowed ranchers to seize territory for ranching, becoming willing partners alongside miners in Nevada's ongoing economic development. As mining towns sprung up throughout the state, farmers and ranchers established operations along nearby creeks and rivers and provided goods and supplies. For many of Nevada's rural communities, the dependence on ranching or mining income, or both, is still a central component of their economies.[1]

Nevada's landscape, environment, and political culture contributed to the success of ranching. Defined by broad valleys and long mountain ranges extending north-south across the state, Nevada is predominantly arid. Seated in the Great Basin, both in the rain shadow of the Sierra Nevada mountains and with most of the waterways flowing through Nevada not reaching the sea, the state is mostly desert or sagebrush steppe, punctuated by dry lake beds and dramatic mountain ranges. The mountains capture snowfall in the winter that provides most of the region's water supply, and sustain pinion, juniper, and pine forests. Because of the region's arid nature, large-scale private ownership is generally economically infeasible due to the high cost and low returns of owning large acreage in this high desert. As a result, just over 80% of Nevada is owned by the federal government, most of that being under the oversight of the Bureau of Land Management. The vast acreage of the federal government in Nevada means that the majority of the state's territory is rural. As such, like several western states, cattle and sheep ranching became the most strategic use of much of these public lands, creating a unique relationship between ranchers and the federal government that has fluctuated, sometimes dramatically, over the last century and a half.[2]

The region of Nevada that is the subject of this MPDF is situated east of Lake Tahoe where the Carson Range of the Sierra Nevada drops into the Carson River watershed, specifically along the middle portion of the Carson River as it enters Nevada from its headwaters in California. The valleys through which the Carson River runs as it leaves the Sierra Nevada Mountains are a primarily agricultural landscape that includes some of the earliest settlements in Nevada, nestled against the eastern foothills of the Sierra Nevada. The landscape is dominated by two main valleys: Carson Valley to the south and Eagle Valley to the north. Both are well-watered by snowpack from the Sierras that runs into tributaries of the Carson River starting in Eldorado, Alpine, and northern Mono Counties in California. The snowpack that feeds the upper Carson River supplies ample water for a robust and agricultural landscape that is relatively unique in Nevada. The cultural landscape of ranching and farming on the upper Carson River stretches from the alpine reservoirs along the Carson Range of the Sierra Nevada Mountains downward to the north and east through the California farming communities of Woodfords and Fredericksburg, through Douglas County in Nevada and into Carson City (formerly Ormsby County). The Carson River continues through Storey and Lyon Counties before emptying into the Carson Sink in eastern Churchill County. Although Carson and Eagle Valleys are still arid, receiving around 11 inches of total precipitation per year, the snowmelt from the Sierras charges the Carson River and valley water table with enough water to sustain intensive, irrigated farming on a much broader scale than elsewhere in Nevada. The availability of water from snowmelt has often led to periodic flooding of the Carson River watershed in winter and spring months when melting snow fills and overflows the river's banks. These two valleys also share a

[1] John M. Townley, *Alfalfa Country: Nevada Land, Water & Policies in the 19th Century*, (Reno: Agricultural Experiment Station, Max C. Fleischmann College of Agriculture, University of Nevada, Reno, 1980), 1; James W. Hulse, *Nevada's Environmental Legacy: Progress or Plunder*, (Reno & Las Vegas: University of Nevada Press, 2009), 1-2.

[2] Congressional Research Service, *Federal Land Ownership: Overview and Data*, by Carol Hardy Vincent, Laura A. Hanson, and Jerome P. Bjelopera, Report #42346, Washington, D.C., 2014, 4 https://archive.org/details/R42346FederalLandOwnershipOverviewandData-crs, accessed Nov. 23, 2016.

common history in the historical foundations of Nevada and its agricultural development, much of which remains visible today. Where Mormon farmers first dug ditches and laterals into their pastures and orchards in the 1850s, modern farmers largely continue those practices, albeit with new crops and livestock, and new markets driving their production.[3]

Ranching and Irrigated Farming in Northern Nevada: An Overview

Farming and ranching have been central to the image and the economy of the American West and the state of Nevada since the mid-nineteenth century. In western states such as Nevada, a combination of federal land use policies, agrarian politics established in the early nineteenth century, and environmental realities combined to create a unique economic landscape in which private ranchers relied on access to public, regulated lands to sustain large-scale ranching operations. This was a significant departure from federal land use policies established after 1785 that emphasized the distribution of the public domain into private hands via small land grants. Western ranchers stood in contrast to the classic American image of yeoman farmers and relied on larger private holdings and public subsidies through range management, largely as a result of the American West's arid environment that rendered the traditional small farm model impractical. Even in the relatively well-watered Carson and Eagle Valleys, farming was generally devoted to pasture and hay crops, with the raising of livestock being the dominant economic activity. What little farming did take place was often dependent upon local markets and influenced by highly variable seasons. Farmers in the 1860s who had cultivated vegetable crops and fruit orchards in the 1860s struggled to keep their crops alive amid early frosts and fluctuating markets. Even here, water and grassland was not so abundant that ranchers could make do without summer ranges on public lands in the Sierra Nevada and Pine Nut mountain ranges. As with all things related to agriculture in Nevada, access to water governed how farming and ranching developed.[4]

Far from simply an economic activity, ranching and farming in the west imbued its practitioners with a particular culture that affected both the management of livestock and the landscape itself, from the land use patterns of ranches to the architecture of their buildings. The ranching culture of the western United States is immensely diverse, but emerged from two dominant bases in Texas and California. In Nevada, California-based traditions and practices established by Spanish and Mexican ranchers generally dominated. However, the early settlement of Carson and Eagle Valleys by those of English and German descent created an enclave of English and German cattle traditions farther west than the usual reach of these practices which tended to be concentrated in northeastern Nevada and farther east, and that emphasized controlled pasture and public commons. Most ranching in Nevada adopts a particular seasonal schedule, with early spring dedicated to calf branding and marking, and cattle usually turned out soon after onto public grazing allotments. At the same time, hayfields are tilled under and replanted, and gardens, if present, planted near main ranch houses. Summer usually entails harvest of the first crop of hay in July, which is brought in for storage, with a second crop being grown if sufficient water rights allow. In many environments in Nevada, grazing of cattle transitions through various eco-zones throughout the year in a pattern established long before the presence of federal land management agencies in the region. With the year beginning in spring, ranchers often begin grazing their livestock in private pasture, but move quickly to Bureau of Land Management (BLM) tracts on the valley floors. They then move their stock and spend a significant portion of the summer on allotments in the mountains, most of which are now managed by the U.S. Forest Service (USFS). At the beginning of the fall, depending on conditions but usually between late August through November, ranchers return their cattle to a central ranch complex where they are finished (fattened for market) on privately-owned pasture or on baled hay stored in stacks or barns. It is during the fall that most animals are culled from the herd for sale.[5]

[3] U.S. Department of Agriculture, Soil Conservation Service, *Water and Related Land Resources, Central Lahontan Basin – Carson River Subbasin, Nevada – California*, Carson City / Minden, Nev., 1973, 3-4.

[4] Paul F. Starrs, *Let the Cowboy Ride: Cattle Ranching in the Western United States*, (Baltimore: Johns Hopkins University Press, 1998), xv; Leisl Carr-Childers, *The Size of the Risk: Histories of Multiple Use in the Great Basin*, (Norman: University of Oklahoma Press, 2015), 23; James W. Hulse, *The Silver State: Nevada's Heritage Reinterpreted*, (Reno & Las Vegas: University of Nevada Press, 1991), 133.

[5] Starrs, *Let the Cowboy Ride*, 5-6; Howard Wight Marshall, *Paradise Valley, Nevada: The People and Buildings of an American Place*, (Tucson: University of Arizona Press, 1995), 11, 13-16; Mary Ellen Glass, *Fred H. Settelmeyer: Recollections of Ranching in*

Paving the way for this ranching landscape was the conquest and settlement of the American West by the United States. Nevada itself was initially claimed by Spain, and later Mexico, but became part of the United States following the Treaty of Guadalupe Hidalgo in 1848 that ended the war between the United States and Mexico. The treaty transferred much of the present-day American West from Mexican to American control, including most of the future states of Nevada, California, Arizona, New Mexico, Colorado, and Utah. Due to the geographic barriers of the Utah desert, the Colorado River, and the Sierra Nevada Mountains, the Spanish and Mexican presence in Nevada had been minimal and temporary, with the most permanent Spanish cultural centers established along the California coast and along the Rio Grande River in New Mexico. Although the Spanish sent missionaries and traders into northern Nevada to interact with the Washoe and Paiute, their presence was temporary. The discovery of gold in California in 1849, coupled with the establishment of the Mormon state of Deseret in 1847, provided the first impetus for settlement in what would become Nevada by citizens of the United States.

In these early years of settlement, the location of agricultural operations depended heavily on the mining industry. Like much of the Great Basin, the climate is arid and early explorers in the future state recognized that poor soils and slight rainfall would provide persistent challenges to any long-term agriculture. Nevada's first agricultural success preceded the mining rush to the area, occurring while the region was still western Utah Territory. Throughout the 185s, stations and ranches developed on overland trail routes along the Humboldt, Truckee, and Carson Rivers, with small operators supplying hay to travelers, at first relying on native grasses in fields irrigated by rudimentary ditches. However, after the discovery of the silver Comstock Lode in 1859, the trend in Nevada's agriculture was that farms and ranches closely followed ore discoveries, seeking to provide supplies for mining and milling towns nearby. Ore discoveries in the 1860s from Humboldt County south to Esmeralda relied on California ranches for most of their beef supplies, but a drought in 1864 pressed most of their herds into western Nevada, revealing the grazing possibilities of the northern part of the state. Farms and ranches developed in earnest throughout northwestern Nevada along the Carson, Truckee, Humboldt, Walker, and Reese rivers. In most cases, choice bottom land went quickly, with native grasses such as Basin Wildrye (*Leymus cinereus*) supplying hay for livestock. However, as ranchers depleted the native grasses, they typically planted grains such as wheat or barley and constructed irrigation networks to provide sufficient water. After 1863, most farmers began incorporating alfalfa into their hayfields as a well-performing crop in Nevada's alkaline soils. Hay farms proved critical to Nevada's early economy as one of the only sources of energy for the livestock that moved overland travelers to Oregon and California, and moved silver and gold ore from mines to mills and markets. This rapid development of ranches between 1860 and 1880 gave Nevada's agricultural landscape much of the shape it takes on today.[6]

In most cases, those who arrived and established farms and ranches found their ownership of the land upon which they settled in question until the late 1860s. A lack of consideration for native claims to the land, and lack of treaties between the U.S. government and either the Washoe or northern Paiute, led the first settlers to simply squat on choice land as they saw fit. Military conflict between the Paiute and Washoe and the federal government was brief, as troops out of Forts Churchill and Ruby among others brutally suppressed resistance, most notably during the campaigns of the 1860 Pyramid Lake War. Although an alliance of Paiute, Shoshone, and Bannock scored early victories in this conflict, by the end of the year, combined federal troops and militia had defeated most northern Nevada tribes in a series of battles and massacres along the overland trails. Mormon settlement during and prior to this conflict brought some organization, but it was not until Nevada's entry into the union as a territory in 1861 that land ownership within Nevada's borders took shape. Under territorial governance, most land law, survey, and distribution was left to the federal Land Office. However, as part of Nevada's transition to statehood, the federal government ceded approximately 4.5 million acres to the state

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Carson Valley, Work as a Nevada State Senator, and Involvement with Western Water Problems, (Reno: University of Nevada, Reno, Oral History Program, 1971), 16.

[6] Carr-Childers, 9; Townley, *Alfalfa Country*, 19-24; James A. Young and B. Abbot Sparks, *Cattle in the Cold Desert*, expanded edition, (Reno & Las Vegas: University of Nevada Press, 2002), 48.

government, 660,000 to be sold to finance internal improvements, and 3.9 million to be sold for the support of local school districts. The state took on a strong role in land sales, with the federal government delegating the task of processing existing claims and withdrawals to the state completely by 1867. Murky land law prior to the state's establishment, and significant deregulation of the state's land sales system, allowed many farmers and ranchers who had not already done so to consolidate a great deal more land under their ownership than many of the federal land laws had intended. Most of the choice land within these transfer areas had either already been claimed prior to that year and were awaiting formal survey, or were claimed quickly thereafter under loosened state regulations to encourage settlement and raise revenue for the state's small education fund, putting most of that 700,000 acres in private hands by 1871. In 1880, recognizing that many of the 1862 Morrill Land Grant sections given to the state to fund school districts could not be sold to farmers due to lack of water, a land deal between Nevada and the federal government traded and transferred two million acres of higher quality land to the state. This accelerated additional land sales through the 1880s and 1890s. By 1902, with the Reclamation Act on the horizon, most of the available land for settlers was marginal at best, and often overgrazed or stripped of timber.[7]

However, the completion of the Central Pacific Railroad across northern Nevada in the 1860s created economic challenges for area farmers and ranchers. Reduced costs of long-distance transportation meant that the market for hay declined drastically. Trains provided the transportation services that horse and ox-drawn wagons had before, compelling many western Nevada ranchers to switch from hay to beef production as their primary hay buyers, teamsters, and wagon companies, left the market. Beef production had actually begun earlier in the 1850s to supply local and California markets, but dual factors created a vacuum in the agricultural market that beef cattle filled. First, the mining boom in Nevada's northern regions compelled many California ranchers to add or shift operations across the Sierra Nevada in response to the new demand for beef. Furthermore, increased access to larger market areas along the west coast provided by railroad lines made it easier for smaller ranching operations to get their cattle to buyers in larger cities such as Sacramento, San Francisco, and Chicago. Farmers in Nevada also irrigated fields for produce, especially potatoes that became renowned on the west coast in the 1860s. However, in sheer volume, hay and pasture remained the dominant agricultural activity in the state.[8]

Press coverage during the nineteenth century emphasized Nevada's mining economy, meaning that mining exercised more political power and attracted more financial investment throughout most of the state. The few exceptions to these imbalanced popular perceptions were concentrated in three Nevada counties: Elko, Humboldt, and Douglas. Settlements along the Humboldt River in particular experienced massive expansion during the 1860s, including the development of farms and ranches from Paradise Valley and Winnemucca to Elko and Wells. During the same period, cattle ranchers moved into the Lemmon Valley along the lower Carson River, raising livestock and growing hay crops, largely aimed at Virginia City area markets. Some of the most rapid agricultural development in Nevada occurred in Washoe Valley and the Truckee Meadows, also largely supplying Virginia City area markets. It would take the precipitous decline of precious metals mining in the state after 1880 for most Nevadans to recognize the quiet establishment of a strong and relatively stable ranching economy along the Carson, Truckee, and Humboldt River basins. As markets in Nevada mining towns declined, farmers and ranchers took advantage of the completion of the transcontinental railroad to create a lucrative winter feeding industry in western Nevada for California and eastern Nevada ranchers. Although Douglas and Ormsby Counties never commanded the state's agricultural economy, they also never commanded the vast acreage contained within the borders of Humboldt or Elko counties. In 1873, the State Surveyor-General documented that while Douglas County led the state in acres cultivated at 18,503, it produced only 8,000 tons of hay and 18,800 bushels of grain in that year, in part due to the use of most acreage for pasturage rather than harvest. As a comparison, Elko County had 15,000 acres in cultivation, producing 15,000 tons of hay and 219,800 bushels of grain. Humboldt County came in a close second in production with 10,000 acres cultivated, producing 6,000 tons of hay but 150,350 bushels of grain. Both Elko and Humboldt Counties had significantly more acreage in their boundaries that could be used for open range grazing than that found in the

[7] Townley, *Alfalfa Country*, 2-4, 46, 48; Hulse, *The Silver State*, 137.
[8] Townley, *Alfalfa Country*, 19-20, 23.

narrower valleys near the eastern Sierra Front. As a result, northeast Nevada continued to dominate both livestock and grain crop production in the nineteenth century.[9]

The ranchers who arrived in Nevada in the mid-nineteenth century generally brought with them livestock with which they were already accustomed, being unfamiliar with the unique and harsh climate of the western Great Basin. Many early travelers to California and Oregon in the 1840s and 1850s drove British Devons and Shorthorns, cattle acclimated to wet environments with lush pasture, of which there was little in Nevada and California. The need for pasturage propelled some of the earliest irrigation projects in Nevada's valley bottoms. With the completion of the transcontinental railroad in 1869, ranchers from Elko south to the Old Spanish Trail began introducing alternative varieties, including the Texas Longhorn, a wild Mexican cattle variety known for its hardiness in desert climates and resistance to disease. The Longhorn was especially suited to the Spanish ranching traditions so popular in much of Nevada, which turned out cattle on their own, with periodic collection for market sale or slaughter. Nevada ranchers with little land to irrigate for pasturage looked at this breed as an opportunity to produce wealth from the state's sparse ranges. However, the Longhorn proved a poor choice for Nevada's relatively harsh climate, succumbing easily to the colder temperatures of the state's high desert. By the 1870s, Durham shorthorns became a popular if short-lived import, especially in the northeast part of the state. By the end of that decade the larger Hereford variety, developed in Herefordshire, England and a popular beef cattle in the western United States, began to supplant the smaller Durham cattle, a transition that has held into the present. Although many ranchers resisted Herefords as they were not purebred and had an unclear pedigree, they proved well-suited for Great Basin ranching, being tolerant of drought, summer heat, and winter cold, and known for early maturation and their ability to spread out over large ranges to find food and water rather than bunching together. Another late addition to the western ranges was the Angus, developed in northern Scotland and imported to Canada around 1873. The Angus was popular for its stocky frame and high-quality beef, leading many western American ranchers to cross breed it with the Hereford, creating the well-known Black Angus Hereford variety.[10]

Sheep ranching began similarly to cattle ranching, with itinerant ranchers, many of them Basques, driving sheep across the Sierras from California into northern Nevada's open range in the nineteenth century. Sheep ranchers brought both Churras sheep and the more renowned, if less common, Merinos, eventually crossbreeding them to combine the fine wools of the latter with the hardiness of the former. As with cattle, the completion of the transcontinental railroad provided increased access to Nevada's grazing areas, with California sheep raisers moving and expanding their stock into Nevada rangelands. Propelled by a severe drought in California in 1870, sheepherding in many counties began to rival cattle ranching, raising concerns about armed conflict between competing graziers. Between 1872 and 1873, Nevada's annual wool clip increased from 100,000 to 300,000 pounds, signaling a massive influx of sheep. The lack of any fencing laws in the state made Nevada an ideal place for graziers of both sheep and cattle, leading to the acquisition of most suitable grazing land by private interests by 1873. Although the regulation of public ranges after the Forest Reserve Act of 1891 and the Taylor Grazing Act of 1934 pushed many itinerant ranchers out of business, many chose to homestead parcels and transitioned to a combination of permitted grazing on public ranges and pasturage on privately held lands.[11]

In most counties where farmers and ranchers established irrigated cropland, alfalfa remained the primary irrigated crop, as it provided nutritious feed for livestock and thrived on Nevada's mostly alkaline soil and harsh climate. Alfalfa (*Medicago sativa*) originated in southwestern Asia and traveled to Europe via trade routes well before the colonization of the Americas. Introduced to the American continents by Spanish settlers, the crop thrived in dry, irrigated environments but failed experiments by American farmers such as George Washington and Thomas Jefferson to adapt it to east coast farming. Successful Spanish farmers brought the plant north from Chile into California by the 1850s, where it spread into the western states and became a staple crop throughout

[9] Townley, *Alfalfa Country*, 6, 10, 24, 32-33.
[10] Walton-Buchanan, 5-8, 37-38; Alan L. Olmstead and Paul W. Rhode, *Creating Abundance: Biological Innovation and American Agricultural Development*, (Cambridge: Cambridge University Press, 2008), 321.
[11] Walton-Buchanan, 9-11, 37-38.

much of the United States' pasturelands. Throughout the 1890s, the U.S. Department of Agriculture experimented with alfalfa, eventually cultivating varieties that could thrive in more extreme regions in both the northern and southern portions of the country. Potatoes and grain had a small market in California and nearby mining towns as well. However, the limits of economic competition, and a strong culture amongst Nevada agriculturalists against crop production, kept the state's agricultural landscape primarily in beef. Where attempts to establish small family farms via irrigation projects in the state moved forward, historian John Townley notes that these proponents often misinterpreted trends in other states that saw agricultural success from irrigation projects. The detail they appear to have missed was the trend of these very projects generally fostering the concentration of land under fewer owners and tenant farming rather than the espoused ideal of Jeffersonian yeoman farmers. What is clear is that Nevada's agricultural landscape featured a close relationship between irrigated farming and stock raising.[12]

As ranchers transitioned to irrigated hay and alfalfa production in the late-nineteenth century, practices transitioned toward more mechanical, industrial farming techniques. Nevada ranchers learned by the 1860s that alfalfa thrived on light irrigation in sandy soils, generally where tall sagebrush stands were already established. Ranchers frequently burned off the sagebrush stands, and then used disks to break up and level the soil for planting. Leveling after disking using graders was especially important for alfalfa crops as new alfalfa seedlings typically die if over-watered. The impacts of this in many of Nevada's alfalfa-heavy agricultural areas is apparent, with valley bottoms and intensively farmed areas being relatively devoid of dramatic topography with a surprisingly flat profile, an indication of 150 years of cultivation of alfalfa. This may have prevented serious side effects related to irrigated agriculture such as water-logging, that plagued other irrigated desert environments in Nevada such as in the Lahontan Valley after 1905. The need for irrigation meant that engineers capable of designing massive irrigation systems possessed a highly sought-after skill. As a result, engineers, either professional or self-taught, became some of the most prominent citizens in these early agricultural communities. As irrigation engineers progressed and refined their techniques into the early twentieth century, they began to inform the smaller aspects of effective irrigation systems, often through government publications that were transmitted throughout the local and regional farming community.[13]

These irrigation systems supported a variety of crops in addition to alfalfa to make hay, the mainstay of much of Nevada's agricultural landscape. Once mature, the various grass mixtures and clovers used to produce hay were cut in the field using various kinds of reapers. Then a hay rake would push the cut hay into linear piles called windrows. After the hay dried sufficiently, a hay loader scooped up the loose hay and dumped it onto a portable conveyor belt that loaded the hay onto a wagon, sent to a barn or to the nearby haystack. Baling machines, added in later years, removed the need for haystacks and allowed for denser piles of hay bales, which remain the norm for storing hay into the present. Farmers and ranchers had to take care to let hay dry properly. Overly wet hay would ferment and rot, becoming poisonous to cattle. Slightly drier and the hay still carried a risk of spontaneous combustion. For this reason, it was (and still is) common for farmers to leave hay bales in the field for several days after baling to ensure the hay can cure appropriately. Appropriate stacking that uses waterproofing and compression to force-dry the hay was also a common method, leading to the use of "beaver slides" in Montana and Wyoming to build haystacks. In Nevada and Utah, hay derricks were more common, stacking loose hay into piles that could contain several tons of hay. If farmers chose to store their hay in a barn, the Jackson hay fork, a common feature on barns in Carson Valley, was a useful, if unreliable piece of equipment that made loading hay lofts much easier.[14]

Alongside hay production, grain and produce farming increased steadily on most ranches beginning in the 1860s. Farmers and ranchers typically grew small fields of wheat for family consumption or for sale in local markets, as shipment to Sacramento or San Francisco was too expensive. Orchards, berry vines, and root crops

[12] Townley, *Alfalfa Country*, 6, 10, 19; Olmstead and Rhode, 277-278.
[13] Walton-Buchanan, 99-100; J.C. Guitjens, "Science, Technology, and the Consequences of Water Development for Irrigation of the American West," in *Western Technological Landscapes*, Stephen Tchudi, ed., (Reno: Nevada Humanities Committee, 1998), 95.
[14] Walton-Buchanan, 100-101.

were equally popular to provide subsistence but also sale to local mining markets. The 1874 Surveyor General's report, the first year in which reliable farming estimates were available from each of the counties, enumerated crop estimates as follows:

1874 Crop Estimates in Nevada			
Crop Variety	Acres Sown	Yield in bushels / acre	Total yield in bushels
Wheat	4,346	17	76,300
Barley	26,654	20	506,790
Oats	5,372	14	74,695
Rye	100	10	1,000
Corn	493	28	13,690
Buckwheat	12	17	200
Peas	326	101	3,450
Beans	53	14	593
Potatoes	4,136	70	290,458
Sweet Potatoes	¼	96	24
Onions	76	55.5	4,210
Hay	72,101	1	72,101
Hops		125lbs	
Beets			314 tons
Turnips			320 tons
Pumpkins & Squashes			5,350 tons
Butter			227,240 lbs
Chees			22,200 lbs
Wood			668,738 lbs
Honey			7,400 lbs

Farmers often milled their grain in local grist mills that were either animal or water-powered, including one of the first in Nevada established at Mormon Station by 1858 along Genoa Creek. The first farmers used hand scythes to cut their wheat crops. After railroads connected Carson City to broader markets, horse-drawn reapers sped up the cutting process. Steam-powered threshers separated the grain from the stalk, with the grain going to flour, and the stalk (or straw) going to livestock bedding or mulch in gardens. The largest ranches had their own equipment and crews. Some ranchers maintained their own equipment and called in neighbors to aid with the harvest. Companies that brought their own equipment and crews for hire out to ranchers were also common.[15]

Despite successful agricultural development in Nevada over the course of the 1860s and 1870s, competition with national producers and reliance on mining town markets that were in serious decline by 1880 meant that the state's agricultural industry faced severe challenges in the last two decades of the nineteenth century. In an effort to reduce production costs, Nevada's ranchers sought a degree of economic autonomy from California business leaders by shipping their stock live on rail cars to slaughterhouses in California cities. They found themselves in competition with the Wholesale Butchers Association, a San Francisco-based cooperative which held a monopoly on beef sales in California's retail outlets and sought to prevent cattle-raisers from selling directly to the Association's clients. Ranchers in Winnemucca and Reno constructed large slaughterhouses to allow them to ship greater volumes of meat by shipping carcasses packed in ice, and to sell directly to retailers. However, pushback from the Butchers Association forced Nevada cattlemen out of the direct sale of their livestock, compelling a return to live shipping and slaughter for local markets, which were dwindling along with declining returns from the state's mines. Failed efforts on the part of the state to participate in the federal Swamp Lands Act of 1850, specifically targeted at the Humboldt River basin, and the subsequent initial failure

[15] Walton-Buchanan, 104-105.

of the federal Desert Lands Act of 1872 to develop reclaimed areas in the west for family farms, further strapped Nevada's farmers and ranchers.[16]

The increasing economic pressure on Nevada's agriculturalists propelled two concurrent trends in the state's agriculture, namely an increase in livestock production and a drive for self-sufficient agriculture through intensive farming. This trend combined with severe drought in the 1880s and an especially severe winter in 1889-1890 to compel western leaders including Nevadans to create a new model of agriculture for the west dependent on reclamation and irrigation. In the early 1880s, rising beef prices and falling hay prices created a national boom in the beef industry as stock herders expanded their herds. In Nevada, competition for grazing land became severe, as the loose state land sale laws of previous decades had allowed ranchers and farmers to amass large tracts of land before the so-called beef bonanza began. However, overproduction by 1886 led to a severe decline in beef prices. This combined with overgrazing throughout much of the American West that reduced forage for livestock throughout the region. Although absentee or itinerant grazing also played a role, Nevada ranchers over-inflated this particular factor as a means to compel action against Basque, Hispanic, and other non-white ranching interests. An 1886 article in the *Carson Morning Appeal* described the increasing stress on Nevada's ranges, observing that "The natural grasses are hardly sufficient to winter the cattle now growing in this State, and unless grass is made to grow artificially it means that the limit of cattle production in Nevada has been reached." With the ranges becoming stressed, ranchers began to transition their practices in the face of new biological and administrative limits. Early ranchers had simply grazed sheep and cattle year-round, sustaining winter pastures through flooding drainages into bottomlands. If any hay was cut at all, it was placed in haystacks until such time as livestock needed it before the spring. Many farmers in the more arid regions of the state were reluctant to construct barns for hay storage due to the minimal availability of lumber and lack of rain that made shelter necessary.[17]

Overgrazing, combined with drought and harsh winters in the late-1880s, led to massive losses among livestock raisers throughout the American West. Some ranchers in Nevada lost up to 40 percent of their cattle in the winter of 1887-1888 alone. Contemporary sources assumed correctly that the actions of Nevada's graziers were a significant contributor to the loss of adequate feed in the state's grasslands. The *Reno Evening Gazette* noted in 1887 that "The present winter experience will be a lesson to many of our stockmen and a new order of things will be inaugurated in the future. More hay to feed and sheds to shelter and protect cattle will be the shibboleth of the leading spirits who control this important interest of Eastern Nevada." Many private companies had begun storing water and increasing their feed crops by this time in the hopes of abating the combination of stressors. Others drove their cattle to other feeding areas ranging from Idaho to the Truckee Meadows, with varying degrees of success. The failure of many larger operations left a vacuum in the market filled by many smaller-scale outfits trying to enter the beef or wool industry. Despite the continued stress on Nevada's ranges, livestock producers did not significantly alter their grazing practices, precipitating a transition in the biotic community from native, predominantly nutritious grasses to both native and non-native invasive species that did not have the same nutritional value. As a result, some agriculturalists adapted their ranching strategies to include more irrigated pasture for winter feed, bringing cattle off the range near winter so they could be protected and cared for until spring. During much of this period into the early 1900s, it was common practice for cattle and sheep ranchers to burn mountain grazing land in the fall, both to drive their livestock down into winter pastures and to clear the summer pastures of woody growth, allowing for grasses to colonize and rejuvenate. However, the arrival of invasive species by the late-nineteenth century meant that native, nutritious grasses lost ground in the burned areas to these colonizing plants, limiting the grazing capacity of the range. The stress applied to the forage resources of Nevada compelled the state legislature to pass several laws in an

[16] Townley, *Alfalfa Country*, 39, 49-54.
[17] *Carson Morning Appeal*, December 4, 1886, p2, in Townley, *Alfalfa Country*, 63; James A Young and Charlie D. Clements, *Cheatgrass: Fire and Forage on the Range*, (Reno & Las Vegas: University of Nevada Press, 2009), 30; Townley, *Alfalfa Country*, 62-63.

attempt to curb indiscriminate use of the range, including levying special taxes against itinerant graziers, predominated by Basque sheep herders and conglomerate stock raising companies.[18]

The rising environmental stressors on the range meant that Progressive Era reforms in Nevada frequently focused on scientific range management, crop science, and mechanization in the agricultural industry. As early as 1901, P.B. Kennedy, a botanist with the Nevada Agricultural Experiment Station, observed that most of the state's ranges had been overgrazed by cattle and sheep. Kennedy began advocating for closer range management over the next decade, stating that the rangelands could be restored if a form of crop rotation with more limited grazing and rotation of grazing areas was implemented. Such ideas found support among the newly founded Bureau of Forests under Gifford Pinchot, and in the administration of President Theodore Roosevelt. Both federal leaders viewed much of the west as unsuitable for farming, and found allies in cattle ranchers who were often at opposition to irrigators over the best use of public lands. Cattle ranchers frequently opposed state and federal reclamation efforts, especially those that imposed small acreage limits on those who could receive water from them, fearing the loss of their rangelands and water rights to crop farmers. However, in Nevada, cattle and sheep ranchers' steadfast reliance on pasture and irrigated crops softened this tension somewhat, as irrigation projects under the right circumstances provided more water for pasture and hay than it did for produce crops. Furthermore, many agriculturalists looked to a new system of university-based experiment stations to test new varieties of crops that might be more resilient and provide nutritious feed for their cattle. Created by the federal Hatch Act of 1887, a system of agricultural research centers in all states experimented with new crop varieties and land management techniques that, if proven useful, became part of a robust series of federal publications circulated to farmers and ranchers to support their operations. In Reno, the Nevada Agricultural Experiment Station at the University of Nevada in Reno made attempts to adapt crop and livestock practices to the harsh and arid climate of the state. Many experiment stations tested imported grain varieties such as crested wheatgrass (*Agropyron cristatum*) and Siberian wheatgrass (*Agropyron fragile*) as candidates to withstand variable temperatures and the region's drastic seasonal shifts. However, the importation of new seed varieties also meant the arrival of some of the region's most notorious non-native invasive species, such as cheatgrass (*Bromus tectorum*), Russian thistle (*Salsola kali*), Canadian thistle (*Cirsium arvense*), and medusahead (*Taenatherum caput-medusa*). These plants were adept at surviving in harsh environments and colonizing soil that had been disturbed by plowing or trampling, and took over large areas of what had formerly been ample grazing land. Such overgrazing also precipitated the expansion of native forbs such as sagebrush (*Artemisia* sp.) and rabbitbrush (*Ericameria nauseosa*).[19]

Despite the environmental stress on agricultural interests, the massive failure of the state's mining industry in the 1880s along with the price of silver allowed farmers and ranchers to gain important gains in water law, including the establishment of prior appropriation rights along the Humboldt and Truckee watersheds. To meet the immediate needs of ranchers in 1889, the state legislature authorized $[illegible],000 for the construction of the state's first reservoir system on the upper Carson River. Approval was gained in a negotiation with Washoe County-area legislators for a bill that, once approved, established prior appropriation water rights within the state until the 1891 legislature repealed both bills under pressure from established ranching interests. Many of the larger ranchers had invested considerable expense in capturing water in private reservoirs on their property, a process which led to severe over-appropriation along waterways that would have been aggravated by state projects. Continued efforts by the legislature went so far as to seek a state boundary adjustment with California to include ideal reservoir sites for the Carson, Truckee, and Walker Rivers, situated on the upper portions of each river in the neighboring state. However, an 1889 delegation of Nevada officials to the California legislature found their proposal rejected.[20]

[18] DCNR-HP&A, Rowley, pp6-7; Walton-Buchanan, 96-99; Young and Clements, 44-47, Townley, *Alfalfa Country*, 63-64, 107; U.S. Department of Agriculture, Natural Resource Conservation Service, "Medusahead," by M.E. Stannard, D.O. Ogle, and L. St. John, 2010, http://plants.usda.gov/plantguide/pdf/pg_taca8.pdf, accessed September 22, 2016; U.S. Department of Agriculture, National Agricultural Library, "Canada Thistle," 2016, https://www.invasivespeciesinfo.gov/plants/canthistle.shtml, accessed December 12, 2016; *Reno Evening Gazette*, September 9, 1887, p2, in Townley, *Alfalfa Country*, 107.
[19] Hays, 62-65; Paul L. Tueller, "Rangelands in the Silver State," in Tchudi, *Western Technological Landscapes*, 122.
[20] Townley, *Alfalfa Country*, 75-76, 79-80, 112-113, 115, 122-123.

Adding to the desperation was an ironic arrival of precipitation in the region with heavy snowfalls blanketing Nevada in the winter of 1889-1890. However, the cold temperatures and poor winter forages and feed supplies led to severe losses in Nevada's livestock herds, with some ranchers losing almost their entire herds. Aggravated by drought, by 1891, Nevada farmers and ranchers had lost 40% of all their range cattle, 30% of all their horses, and 45% of all of their sheep. The massive die-off of livestock devastated the ranching industry in Nevada temporarily, but actually provided some respite for over-taxed grazing lands, as the state legislature shifted its attention to the revival of the state's floundering mining industry. This forced many of the state's agriculturalists to find their own way to address the economic shortcomings of the industry. Flour milling and dairying became popular alternatives to consume the oversupply of hay and grain that plagued many of the state's farms and ranches into the 1890s. The state's first "Buy Nevada" campaign emerged out of Reno, as H.H. Beck, the operator of Reno's Riverside Mill, pressed for self-sufficiency in the flour trade. His successful campaign led to the construction of mills throughout northwest Nevada in the 1880s and 1890s.[21]

Dairying especially became western Nevada's response to the need for diversification and drive for self-sufficiency in the 1890s, concentrated in the Truckee Meadows, Carson Valley, and Mason Valley. However, the state's rise as a dairy producer still depended on California markets, with ranchers processing their milk into other products, mostly butter, and shipping it by rail to California distributors and retailers. Some larger dairy ranchers purchased their own creamery equipment, but most established cooperatives to collectively purchase equipment and manage dairy processing. In general, 100 pounds of milk produced 4 pounds of butter, with the remaining skim milk becoming feed for hogs, creating a small but vibrant pork industry in the northwest portion of the state. Generally, the phenomenon of dairying remained isolated to a roughly 50-mile buffer around the Virginia & Truckee and Southern Pacific railway corridors, with the rail lines providing critical market access for perishable dairy goods. As a result, Nevada producers still found themselves dependent on out-of-state markets due to declining population within the state, leading to the increasing specialization of the state's agriculturalists. Where dairy did not dominate, beef production for California and Utah buyers became the mainstay. While some farmers experimented with the viability of crops such as potatoes and grains, livestock and feed became the mainstay of most producers. Mormon settlements in southern Nevada along the Virgin and Muddy Rivers became the only farming landscape that maintained success in growing diversified crops for local use. The reliance on agriculture for economic activity led the Nevada legislature to spend a great deal of effort attempting to create a state reclamation system to maximize irrigable acreage within the state. However, these attempts either failed to pass due to resistance from large cattle operations within the state, or suffered bungled implementation, leading to increased calls for a federal solution to the state's agricultural woes.[22]

As part of the reinforcement of the agricultural industry and transition to more pasture-based livestock practices, many western ranchers allied as part of a push for management of the public ranges. Despite the prevalence of private irrigated pasturage in Nevada ranching operations, ranchers generally still relied on transhumance practices to provide summer forage for their stock. Competition between property-owning ranchers and itinerant ranchers compelled many ranch owners to press the federal government for an agency to manage public ranges by permit. Combined with other interests concerned with watershed protection and excessive logging, the ranchers' efforts culminated in the General Land Law Revision Act, passed by Congress in 1891 which included provisions to create forest reserves throughout the country. It also created an oversight agency that would ultimately be known as the U.S. Forest Service. Land-owning ranchers throughout the west sought the creation of National Forests to ensure that watersheds and grazing resources were preserved for annual use. Although the outward expression of this advocacy was to protect mountain grazing resources for all users, most land-owning ranchers sought to push itinerant ranchers, many of them of Basque descent, out of the stock-raising business.[23]

[21] Townley, *Alfalfa Country*, 125-127.
[22] DCNR-HP&A, Rowley, p9; Townley, *Alfalfa Country*, 63-64, 127-128.
[23] DCNR-HP&A, Rowley, p9; William D. Rowley, *U.S. Forest Service Grazing and Rangelands: A History*, (College Station: Texas A&M, 1985), 5.

Unlike most of the American West in the 1890s, Nevada did not experience population growth and economic development, but rather limited stagnation and population decline as it transitioned from a mining-based economy to an agricultural economy. With most of Nevada's farms and ranches being run by single families, occasionally with small numbers of hired laborers, the need for workers and availability of land was simply not equal to neighboring western states. Over the course of the late nineteenth century, Nevada's number of farms doubled, total farm acreage increased ten-fold, and the average size of farms increased from 200 acres to nearly 1,200. The result was that over the course of the mid to late-1890s, coupled with drought in California that hampered agriculture there, Nevada's farmers and ranchers made serious gains as prices rose for their products, accelerated by a blackleg epidemic in California in 1898. Blackleg is a bacterial infection that causes gas filled blisters to form on muscle tissue with black mottling under the skin and swelling limbs, usually causing death within a short time after an infected cow expresses symptoms. The epidemic led to a dispute among Nevada ranchers, many of whom were actually California-based with extensive range holdings within Nevada. During the crisis, Nevada-based ranchers were able to supply much of the demand for beef to the east that California could not supply due to a quarantine on their beef for the remainder of the year.[24]

For most of Nevada, the developments in the late-nineteenth century leading into the Progressive Era radically shifted the framework for farming and ranching in the state, typified by an increasing focus on good range management and an increasing expectation of federal involvement. Reclamation in particular dominated agricultural conversations throughout the 1880s and 1890s. Discussions rarely moved beyond lip-service at both the Nevada legislature and in Washington, but increasing public pressure eventually forced an outcome. Eleven years after the establishment of the U.S. Forest Reserves, Congress followed up with the passage of the Reclamation Act of 1902. Championed by Nevada U.S. Senator Francis G. Newlands, the bill authorized federal funding to establish large-scale irrigation districts throughout the American West to expand the reach of western agricultural production, but leaving those irrigation systems under the regulation of state water engineers or other officials. In Nevada, the Carson-Truckee Irrigation Project, later renamed after Senator Newlands, diverted water from the Carson and Truckee Rivers to farms in Washoe, Churchill, and Lyon counties. Although the Newlands Irrigation Project precipitated extended litigation along the Carson River that was not resolved until 1980, it did pave the way for the expansion of agriculture in northwest Nevada, specifically the expansion of alfalfa production. Still reliant on California markets, Churchill, Lyon, Douglas, and Ormsby County farmers produced large quantities of alfalfa until being hit hard by the post World War agricultural depression in the 1920s, and a devastating quarantine by the State of California in response to an alfalfa weevil outbreak during the same time period.[25]

The stock market crash of 1929 proved disastrous for Nevada's livestock industry. Although not as drastic a loss as other industries in the nation, the decline of agricultural income that had begun in the 1920s only worsened after the crash, as the lending institutions that had been keeping farms and ranches in the state afloat folded due to losses in investment income. In Nevada, the bank network operated by famed Nevada financier George Wingfield folded, removing a valuable source of stability and credit to agriculturalists. Farm and ranch income statewide fell further from $22.1 million in 1928 to $6.4 million in 1932. In an effort to assist the livestock industry that dominated so much of the state's economy, Governor Balzar appointed a State Agricultural Relief Committee. During its life, the Committee secured freight rate reductions on feed sent into Nevada and on livestock that had to be moved inside state boundaries to feeding areas. The Committee also received over 12 million pounds of wheat to be passed from the Federal Farm Board to stockmen. Although helpful, these actions were not adequate, compelling Balzar to establish a State Emergency Relief and Construction Committee attached to the Agricultural Relief Committee, with the hopes that Nevada would receive federal relief funds from the Reconstruction Finance Corporation. This signaled a shift from state to

[24] Townley, *Alfalfa Country*, 165-170.
[25] Townley, *Alfalfa Country*, 14-15, 111, 173-175; Grace Dangberg, *Conflict on the Carson*, (Minden, Nev.: Douglas County Historical Society, 1975), 150; Samuel P. Hays, *Conservation and Gospel of Efficiency: The Progressive Conservation Movement, 1890-1920*, (Pittsburgh: University of Pittsburgh Press, 1999), 18-19.

federal responsibility in responding to the economic crisis and one that became a defining characteristic of the New Deal era. In Nevada, stockmen who had gone bankrupt frequently had to give up their ranches to Pacific and East Coast bankers, changing the tenor of the state's livestock industry. In the early 1930s, state agencies such as the Nevada Livestock Production Credit Association and the State Emergency Relief Committee became clearing houses for federal programs and funding, providing aid in various forms and support for ranchers and farmers to refinance their properties. A severe drought in 1934 hampered these efforts, and subsequent support from the federal Agricultural Adjustment Administration, the Rural Rehabilitation Administration, and the Soil Conservation Service struggled to rebuild Nevada's former agricultural success. The Civilian Conservation Corps established camps throughout the state to assist with agricultural projects, from fence-building to irrigation projects. Recovery was slow but steady, rising from a state-wide farm income of $8 million in 1932 to $12.4 million in 1935, and then to $16 million in 1940 aided by the need for supplies in Europe at the start of the Second World War.[26]

Amid the Great Depression and New Deal era, several federal programs implemented in Nevada sought to assist the floundering agricultural industry. The passage of the Taylor Grazing Act of 1934 spelled a significant shift in the livestock industry in western states and the introduction of federal range management throughout most of Nevada. The act sought to reduce overgrazing by limiting grazing on public lands through permits, reducing the amount of livestock that could graze on public lands, and buying back homesteaded property that was simply too unproductive to support a ranching operation. The implementation of this federal law was controversial and altered the landscape of ranching statewide, forcing ranchers to rely on federal grazing permits from the Grazing Service or Forest Service to sustain their cattle, especially in the northern and eastern sections of the state. With part of the permit requirements including preferences for nearby ranchers, sheep graziers who often did not own ranches were forced to either acquire ranches or to leave the industry. Other organizations such as the Works Progress Administration (WPA) and the Civilian Conservation Corps (CCC) improved irrigation networks, constructed new fences, built watering ponds or reservoirs, and built other features to improve private ranching operations.[27]

The postwar age saw further transformation of the agricultural industry in the American West, especially as public land came under new pressures and demands. Where federal land had previously been used primarily for mining and ranching, it was now used for a number of different tasks, both public and private. American families traveled to national parks and forests in record numbers, viewing rural areas as valuable scenery as much as a reservoir of raw materials. Advances in ecological science forced land use managers to confront environmental realities and implement national laws seeking to preserve clean air, water, and wildlife. Congress' passage of the Multiple Use-Sustained Yield Act of 1960 shifted much of the U.S. Forest Service's territory in the American West from use as summer sheep and cattle grazing lands to multiple-use management rather than simply timber cutting and grazing. In 1961, regional forester Floyd Iverson, who oversaw much of Nevada's National Forest territory, informed the state's U.S. Senator Alan Bible that the likelihood of curtailed grazing in the Humboldt Forest for Nevada ranchers was high, in order to provide for range and watershed restoration. The Bureau of Land Management's 1974 environmental impact statement on nation wide grazing severely curtailed grazing efforts on BLM land as well, leading to political fallout for the agency as it was forced to balance management between graziers, miners, recreational users, and ecological needs. This culminated in the passage of the Federal Land Policy and Management Act (FLPMA) of 1976, which Congress hoped would provide a framework for balancing these competing interests. The act transformed the BLM's operating framework from one that had been pushing public land into private hands, to one that sought to maintain and manage land in federal ownership. The increased pressures and limitations on grazing that resulted from this act precipitated a movement in Nevada beginning in 1979 that claimed the public domain in Nevada was the property of the State of Nevada rather than the federal government. Commonly termed the Sagebrush Rebellion, the movement lasted into the 1980s, but ultimately failed as a coalition of state's rights activists

[26] Elliott, *History of Nevada*, 289; Renée Corona Kolvet and Victoria Ford, *Civilian Conservation Corps in Nevada: From Boys to Men*, (Reno & Las Vegas: University of Nevada Press, 2006), 30-38.
[27] Elliott, *History of Nevada*, 289-291; Tueller, 124.

disintegrated amid concerns that transfer to the state would result in massive sell-offs into private hands. The limitations that remained on ranchers, combined with sharp increases in beef production in the American Midwest and the subsequent fall in beef prices, forced many ranchers with small operations to either consolidate or close down entirely, usually selling their land to housing developers or to larger ranch operations. [28]

Alongside economic and land management transitions, the years following the Second World War involved a steady but major shift in the way western ranching occurred in places like Nevada. Declining revenue forced small farm and ranch owners to sell to larger interests who could absorb the annual ups and downs in the market and the lower consumer prices for their products, resulting in more land consolidated under fewer ranchers. Between 1950 and 1970, the number of Americans employed in farming fell from 7 million to 3 million. Between 1945 and the 1980s, the total number of U.S. farms dropped from 6 million to 2.2 million, and the average farm size increased from 200 to 455 acres. In Nevada, as these trends toward larger operations took hold, farm and ranch income increased dramatically from $38.9 million in 1955 to $233.1 million in 1980. The increases mainly supported the cattle industry, as sheep declined from over one million animals in the 1930s to just over 100,000 by 1980 while cattle increased from 320,000 head in 1930 to 660,000 at the end of 1983. Alongside the decline in the profitability of ranching, ranchers found increasing incentives to sell their land for development, as Nevada's landscapes, especially near the Sierra Nevada Mountains, or around Las Vegas, became attractive landscapes for new arrivals to the west. For many ranch owners, selling to a developer spelled more profit and an easier life than attempting to maintain a livestock operation in the Great Basin's harsh environment. Furthermore, as ranching and farming became more energy-intensive and dependent on new technology, it also required greater investments in capital, which privileged large-scale farming and ranching over smaller family operations. The result in arid western states like Nevada was an increased reliance upon, and expansion of, irrigation systems, with the Bureau of Reclamation and other interests expanding the irrigated acreage of the region from 19.4 million acres in 1945 to 36.6 million acres in 1974.[29]

The end of the post-World War II agricultural boom largely came in the late-1970s and early 1980s as a result of global market shifts. The expanded markets that had facilitated the growth of American beef and grain production bottomed out, especially due to fallout with the Soviet Union in 1980, which was a major importer of American grain. Rapidly rising inflation throughout the late 1970s forced many small farmers out of the industry under greater amounts of debt. Rising energy prices due to increased importation of oil also meant that it cost farmers more to operate, inclining successful operations to become larger to keep up with the economies of scale inherent in an increasingly globalized agricultural market. In some cases, the threats to ranching came from the long-held practices of ranching in combination with climate change and shifting land use patterns. A combination of over-grazing, a warming climate, disruption of historic fire regimes, and recovery from settlement-era harvesting expanded native pinon-juniper woodlands into new areas, reducing groundwater in those areas. Continuous over-grazing by livestock and by naturalized wild horses and burros, both of which competed with native foragers such as deer and elk, further disrupted Nevada's grazing landscape. Finally, population increase and climate change began affecting hydrological cycles, leading to less snowfall and quicker snowmelts, and stressing flood control and irrigation systems. Aggravating these climate cycles has been an increasing demand for drinking water from urban environments, placing further stress on farmers who find the cost of water increasing alongside those for energy and other production needs.[30]

[28] Rowley, *U.S. Forest Service*, 231-233, 237; Elliott, *History of Nevada*, 342; Christopher A. Simon, "A Crucible for Populist Resistance: Tracing the Roots of the Sagebrush Rebellion," in *Cities, Sagebrush, and Solitude: Urbanization and Cultural Conflict in the Great Basin*, Dennis R. Judd and Stephanie L. Witt, eds., (Reno & Las Vegas: University of Nevada Press, 2015, 94.

[29] Mark B. Lapping, Thomas L. Daniels, and John W. Keller, *Rural Planning and Development in the United States*, (New York: Guilford Press, 1989); Russell R. Elliottt, *History of Nevada*, 2nd ed., (Lincoln: University of Nebraska Press, 1987), 289, 341; Richard White, *"It's Your Misfortune and None of My Own": A New History of the American West*, (Norman: University of Oklahoma Press, 1991), 514, 521.

[30] White, *A New History of the American West*, 559; Jessica L. Deshazo and Zachary A. Smith, "The Fragile Desert: Managing the Great Basin's Environmental Crisis," in *Cities, Sagebrush, and Solitude*, 114-118, 120-122; Beesley, 187.

These issues have led to disputes that are still active today, most notably in a focus on recovery of Sage Grouse habitat and water disputes between various government entities at the local, state, and federal levels. Specific to the Carson River, increasing demands from urbanizing areas within Douglas, Carson, Storey, Lyon, and Churchill counties has diverted more water away from farmers for municipal use. Agricultural demands from California into Douglas, Lyon, and Churchill counties in Nevada has also required careful cooperation between water interests from both states to ensure fair distribution. Such factors place the region's agricultural future in question. Pushed by these factors and others described above, Nevada's smaller farmers and ranchers have continued to leave the industry, either selling to larger ranching interests or, if in the vicinity of growing towns and cities, selling their land for suburban development. However, demands on the part of those same urban and suburban residents for local produce has revived a trend in northwestern Nevada toward smaller farm operations, so far focused on Mason and Lahontan Valleys, and urban farming in the former Truckee Meadows area around Reno, leaving the future of Nevada's farming and ranching industry uncertain.[31]

[31] White, *A New History of the American West*, 559; Deshazo and Smith, "The Fragile Desert," 114-118, 120-122; Beesley, 187.

Agriculture on the Carson River in Douglas and Ormsby Counties, 1850 – 1980

Although this context begins in 1848 with the earliest agricultural settlements in what became Carson and Douglas Counties, it is important to note that such agricultural practices were predicated on the conquest of the territory and seizure of land from the region's native inhabitants, the Washoe. The territory of the Washoe people has always focused on Lake Tahoe, with the present-day Pine Nut and Virginia mountain ranges being the eastern extent of the tribe's ancestral lands. The Carson River, or *Watah she mu*, and its wetlands became an important part of the traditional cultural practices of the Washoe, which, according to tribal elders, have been in place since creation. Of the three groups of Washoe, the *Wel mel ti*, the *Hung a lel ti*, and the *Pau wa lu*, the latter were considered the inhabitants of Carson Valley. Language variations and geography distinguished the three groups, although they came together throughout the year for special gatherings and events. The year usually began in spring with a large gathering on the shores of Lake Tahoe, or *Da ow a ga*. During the summer, family groups tended to split off and hunt, fish, and gather throughout the Sierra Nevada mountains. In the fall, the *Pau wa lu* would move to the Pine Nut Mountains and take part in the *tah gum*, the pine nut harvest that was the culmination of the fall gathering season, and included hunting and the preparation of meat stores for the winter. The Washoe people practiced horticulture to encourage the growth of particular kinds of plants, and the periodic use of fire to manage forest and grassland landscapes. Although the Washoe traded among the Paiute, Shoshone, Miwok, and Maidu, sometimes traveling as far as the Pacific coast within their trade network, the region around Lake Tahoe remained the base of their ancestral homeland until the arrival of Euro-Americans in large numbers beginning in the 1840s.[32]

1848 to 1880 – Mile Houses, Mormons, and Miners

Agriculture on the upper Carson River beyond the horticulture practiced by the Washoe began alongside the development of overland transportation networks between the eastern United States and west coast of North America in the 1840s. The routes brought travelers westward to California through native territory formerly claimed by Spain (later Mexico). The trails also facilitated the early expansion of the Church of Jesus Christ of Latter-day Saints (LDS), or Mormons, from their base on the shores of Salt Lake to the western extent of Utah Territory from the Carson Valley north to Truckee Meadows. The earliest iteration of the California Trail included several routes through what would become northwest Nevada as travelers pushed through the passes of the Sierra Nevada Mountains. These routes provided the first impetus for agricultural development along the eastern front of the Sierras. Among those routes established was that surveyed by Mormon explorer Henry Bigler along the west fork of the Carson River and over Carson Pass in California, west of present-day Markleeville. Bigler's route brought travelers, mostly gold prospectors, south of Lake Tahoe through Eagle and Carson Valleys and southwest toward present-day Sutter Hill, California. Even those Mormons who made the first forays into Carson Valley initially intended to trade rather than to settle, establishing a trading post in the present-day town of Genoa in 1850 under Joseph Demont to both sell to travelers and trade with the Washoe and Paiute. With the outpost reporting rich grasslands in Carson Valley, the Mormon Church endeavored to place a permanent settlement at the station, thus introducing the first agriculture by Euro-Americans in the area. Having developed effective irrigation networks in Salt Lake Valley and nearby in the late 1840s, the Mormon settlers brought the necessary techniques to harness the rich soils of Carson Valley for agricultural purposes.[33] Settlement under Mormon leadership was relatively slow along the eastern Sierra. In 1850, Mormon settlers H.S. Beatie and Abner Blackburn established a small trading post called Mormon Station near the mouth of Adams Canyon. The following year, a small group of Mormon colonists led by John Reese established another

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[32] Washoe Tribe of California and Nevada, *Wa She Shu: "The Washoe People" Past and Present*, Gardnerville, https://www.washoetribe.us/contents/images/brochures/Wa%20She%20Shu%20Booklet.pdf, accessed March 6, 2017.

[33] Richard Moreno, *A Short History of Carson City*, (Reno & Las Vegas: University of Nevada Press, 2011), 11; Marshall Fey, R. Joe King, and Jack Lepisto, *Emigrant Shadows: A History and Guide to the California Trail*, (Virginia City, Nev.: Western Trails Research Association, 2002), 123-153; Grace Dangberg, *Carson Valley: Historical Sketches of Nevada's First Settlement*, (Minden: Carson Valley Historical Society, 1979), 2; Nevada Department of Conservation and Natural Resources (DCNR), Historic Preservation & Archaeology Division (HP&A), *Nevada Ranching and Farming 1841-1942: A Study Unit for the Nevada State Historic Preservation Plan*, by Evelyne Pickett, (Carson City, Nevada: 1986), 1; James W. Hulse, *The Silver State: Nevada's Heritage Reinterpreted*, (Reno & Las Vegas: University of Nevada Press, 1991), 58.

Mormon Station at the foot of the Sierras in Carson Valley in 1851, which would later be renamed Genoa in 1855. The 1851 Mormon Station consisted of a log cabin, a turnip garden, and a stockade corral of about an acre, built of fifteen-foot logs rammed three feet into the soil to retain livestock and protect against attacks. Trading attracted the presence of cattle drovers, with both Reese's party and Capt. H.A. Parker of Ben Holladay's wagon company driving cattle into Carson Valley in 1851. Four miles to the south, Israel Mott and his wife, California-bound on a wagon train, decided to remain in Carson Valley and established a small home near present-day Mottsville. In these early years, the valley was largely self-governing, with meetings throughout 1851 establishing a land sale system and authorizing anyone with the ability to run a sawmill to do so and take a stand of timber for the purpose.[34]

The first Mormon colonists settled in what was then western Millard County, Utah, and grew barley, wheat, turnips, and watermelons among other crops, inspiring others, Mormons and non-Mormon alike, to settle in Carson, Jacks, Eagle, Washoe, and Pleasant Valleys and the Truckee Meadows. By 1853, Reese's Mormon Station had more than ten acres of turnips and seven of small grains under plow. An ad-hoc local government began formalizing land claims, with John Reese' being the first, a quarter section extending from "Mormon Station south to a lone tree, including all between the mountain base and Carson River." Six other individuals claimed land north and south of the station that year. In 1852, Israel Mott arrived and founded what became the community of Mottsville, partnering with Reese to establish a toll bridge over the Carson River and a toll road up to the Tahoe basin. Also that year, Henry Van Sickle arrived and later claimed land south of Genoa in 1855, hiring Charles Holbrook to build a large house there in 1857. As an indicator of challenges to come, in December of 1852, a heavy snow on Christmas Eve melted soon thereafter, causing serious flooding along the Carson and its tributaries. By 1860, Van Sickle had five barns at the station, usually filled with horses and mules of travelers on their way to or from California.[35]

In March 1853, the settlers of the valley met to confirm land sale procedures. They established that land must be claimed with the county Recorder and that improvements worth $100 must be made within 60 days. Men with families could claim up to 640 acres, and single men could claim 320. Ben Palmer, a black freedman from Missouri, arrived in 1853 and established a 320-acre ranch in what became known as the town of Sheridan, a small black community anchored by three early black and interracial families, the Palmers, Barbers, and Millers. It is believed Palmer and his sister, Clarissa Church, purchased their way out of slavery. Church married a white man named David (or D.H.) Barber, and the couple chose to settle just north of Palmer on a 400-acre ranch, raising their seven children. The small community of Sheridan that grew up around these three ranches became both a ranching hub and a way-station for travelers, with Clarissa Barber becoming well-known in the valley as a matron and hostess. These ranching families employed a combination of black, Indian, and white ranch hands and drove the early development of this section of Carson Valley. Farther east, Desert Station sprang up on the road between Carson City and Esmeralda County as a supply station, near the present-day community of Johnson Lane. By 1888, Desert Station was described as "a hotel and stopping-place for freight teams and travelers. The land has been reclaimed from sage-brush. There is a good house here, a blacksmith shop, barns, and two wells where water is raised by windmills for irrigation, etc." In 1905, the Dangberg Company moved the main Desert Station house to their Buckeye Ranch complex north of Minden. Cultivation in the early 1850s included enough grain to justify a threshing machine by 1854, as well as regionally-known butter from dairy producers in the valley [36]

[34] DCNR-HP&A, *Ranching and Farming in Nevada*, by William D. Rowley, (Carson City, Nevada: no date), pp3-4; Dangberg, *Conflict on the Carson*, 2; *History of Nevada with Illustrations and Biographical Sketches of its Prominent Men and Pioneers*, (Oakland, Cali.: Thompson & West, 1881), 31-32; Helen S. Carlson, *Nevada Place Names: A Geographical Dictionary*, (Reno & Las Vegas: University of Nevada Press, 1974), p71; Moreno, 11-12, 81-83; Townley, *Alfalfa Country*, 21; Hubert Howe Bancroft, *History of Nevada, 1540-1888*, 1890 (reprint, Las Vegas: Nevada Publications, 1981), 79; Dangberg, *Carson Valley*, 3, 8, 40; *The Historical Nevada Magazine: Outstanding Historical Features from the Pages of Nevada Magazine*, (Carson City: Nevada Magazine, 1998), 82-83; Elliott, *History of Nevada*, 51, 116;

[35] DCNR-HP&A, Rowley,pp3-4; *History of Nevada*, 33-35; Dangberg, *Conflict on the Carson*, 2

[36] DCNR-HP&A, Rowley,pp3-4; *History of Nevada*, 33-34, 372; Dangberg, *Conflict on the Carson*, 2; Carlson, p71; Moreno, 11-12, 81-83; Townley, *Alfalfa Country*, 21; Bancroft, 79; Dangberg, *Carson Valley*, 3, 8, 40; *The Historical Nevada Magazine*, 82-83;

North of Carson Valley, a small group of mining prospectors from California constructed the first settlement in what they named Eagle Valley. Their settlement was a small ranch known as Eagle Station, placed along the overland route near present-day Fifth and Thompson Streets in Carson City. Among the earliest of these Eagle Valley ranchers was Benjamin L. King, who established a small ranch on the western side of the valley at the mouth of what is now King's Canyon. Samuel Nevers and his wife Eliza purchased a ranch near Ash Canyon in the 1850s, bringing with them their nephew, Ira Lee Winters. Winters later acquired the Nevers property and expanded it into a sizeable ranch that covered most of what is now west Carson City. For the next four years, the population and acreage under till in both Eagle and Carson Valleys steadily increased under primarily Mormon governance, developing a small but thriving agricultural market by 1855. They supplied both overland travelers to California, and a growing number of prospectors twenty miles east of them near the present-day town of Dayton. They were joined by stations and trading posts throughout the region, including Job's Station at the present community of Sheridan. The prospectors that had established Eagle Station, among other ventures, became packers of good for hauling, and graded a road up Kings Canyon in the hopes that travel over the Sierras could be diverted that direction. However, despite new and growing settlements in Eagle and Washoe Valley, Carson Valley remained the seat of production for much of this early period.[37]

In 1854, the Utah Territorial Legislature established Carson County to govern this section of Utah Territory, which included most of northwest Nevada, and dispatched Orson Hyde to administer the local government. Agitation among non-Mormon locals to separate from Utah Territory compelled the church to send Hyde to impose some degree of order and provide basic government services, a key complaint from Carson Valley residents. Hyde named Genoa as the seat of government for the new county, and established a sawmill at Franktown in southern Washoe Valley. Amid this formalization of LDS administration, over sixty Mormon families moved to Genoa between 1855 and 1856 to develop the community into a permanent town. However, in 1857, in the midst of what almost became armed conflict between the LDS Church and the United States, Mormon leader Brigham Young recalled Mormon settlers from outlying areas to Salt Lake to form a defense. Mormon farm and ranch families that left simply abandoned their farms, ranches, and sawmills. Some returned after the church and federal government resolved the conflict, but found many of the former Mormon ranches now claimed by non-Mormon settlers. Among those Mormons who arrived in an attempt to resettle the area under LDS administration were the Fulstones, a family of English immigrants who had arrived in the Americas in 1855 after converting to the church, and moving to Eagle Valley in 1858. Henry Fulstone, Sr. established a shoe shop on King Street. His two sons, Henry, Jr. and Robert, acquired property northwest of Carson City near the Carson Hot Springs, both constructing houses for their families by 1862. By 1870, Robert Fulstone had amassed a sizeable farming operation of 520 acres, including 26 cows (generally referring to dairy cattle), 20 stock cattle (generally referring to beef cattle), and growing and storing around 18 tons of hay annually.[38]

Amid the Mormon settlement along the upper Carson, several supply stations emerged to serve overland trail travelers headed for California. Among these was Dutch Nicks, established by Nicholas Ambrose in 1855 in eastern Eagle Valley on the site of what would become Empire City. Farther south, the crossing over Clear Creek boasted a blacksmith and telegraph office during its operation in the late 1850s and early 1860s. Proceeding south and west into Jack's Valley, the Jack Winters Ranch offered some respite to travelers if needed, operating most of the valley as pasture and hayfields that could be sold to traveling horse and oxen teams. From Jack's Valley, emigrants proceeded south into Genoa, or Mormon Station, and proceeded along the foothills of the Sierras past other way stations, including Walley's Hot Springs, Van Sickle Station, Mottsville, Sheridan, and Dressler Ranch before proceeding into California via Fredericksburg. Ira M. Luther, a rancher in

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Elliott, *History of Nevada*, 51, 116; Ed Johnson, "The First Black Rancher," *Nevada Magazine*, (January/February 1989), 27; *History of Nevada*, 373.

[37] DCNR-HP&A, Rowley, 3-4; Dangberg, *Conflict on the Carson*, 2; Carlson, *Nevada Place Names*, 71; Moreno, 11-12, 81-83; Townley, *Alfalfa Country*, 21; Bancroft, 79; Dangberg, *Carson Valley*, 3, 8, 40.

[38] DCNR-HP&A, Pickett, 1-2; DCNR-HP&A, Rowley, pp3-4; Hulse, *The Silver State*, 58-60; Moreno, 14; Townley, *Alfalfa Country*, 21; Nevada Department of Transportation, Environmental Services Division, *The Farmer and the Gatekeeper: Historical Archaeology and Agriculture in Early Carson City*, by Peter B. Mires and Margaret E. Bullock, (Carson City, Nev., 1995), 4-5.

the upper (southern) part of Carson Valley, helped establish the community of Fairview in 1858, which included a sawmill, his ranch, a school, and a hostelry called the old Cotton Hotel at the mouth of Luther (or Fay) Canyon. By 1862, Luther was joined by three other ranch steads, including Lute Olds' to the south, and W. Wyatt's to the north. The proliferation of roads through the Sierras for overland travelers became both a blessing and a bane to the Carson Valley's commercial center of Genoa. In 1861, area developers constructed a north-south road through Carson Valley from Carson City, constructing the Cradlebaugh Toll Bridge over the Carson River at the valley's north end, shortening the distance between Carson City and the Twelve Mile House, a station on the road to Aurora. The King's Canyon Toll Road opened in 1863, bypassing Genoa by nearly ten miles to the north, allowing Carson City to rise as a small trading community. However, Carson Valley's size relative to Eagle Valley ensured that it remained one of the key agricultural production centers for the region's growing mining and milling communities such as Virginia City, Dayton, and Aurora.[39]

Although many of the station operators either were Mormon, or settled alongside Mormons prior to their departure in 1857, the neighboring Mormon-owned ranches throughout the valley largely shifted to non-Mormon ownership by 1860 in the absence of any church authority to enforce land laws. With the market still demanding produce for travelers and for new mining towns, these new ranchers filled the gap, providing supplies to travelers on the Johnson's Cutoff of the California Trail, maintaining Genoa as the hub for re-supply along the upper Carson River. Dan DeQuille's 1876 chronicle, *Big Bonanza*, included a quote from an editorial in the Virginia City *Mountain Democrat* which described Carson Valley thusly:

> There are but few houses in the Valley (Carson), and at each house a few acres have been fenced in with sawed lumber, and those seem to have been designed for grazing purposes. I have not seen an agricultural implement since I have been in the Territory, nor only about one acre of land plowed, or bearing any appearance of having been placed in a preliminary state of preparation for cultivation. I am told, however, that there are several good farms in the smaller valleys, back in the cañons among the foothills, but the greatest portion of the valley I have seen is entirely destitute of soil, being a loose, dry, coarse sand, which with all the irrigation and cultivation that could be bestowed upon it, could not possibly be made to "sprout a pea." Taken altogether, the whole country presents a inunviting appearance, and I am satisfied that so far as agriculture is concerned, Carson Valley is an unmitigated humbug. I hope, however, that a more thorough investigation will prove that the small valleys before alludedto, will, when put under cultivation, produce sufficient to meet the wants of the people of western Utah.[40]

Despite these observations, ranching had taken firm root in the valley by 1860, aided by an increasing network of irrigation ditches. That year, Carson Valley, combined with Jacks and Long Valleys and Genoa, included 773 people in 175 dwellings. Eagle Ranch expanded as well, as John Mankins took over many of the former Mormon properties in Eagle Valley. Mankins sold much of this land on August 12, 1858 to real estate speculators including Abraham Curry, F.M. Proctor, B.F. Green, and J.J. Musser, who according to popular legend, found Genoa's property prices too high and sought to purchase land to the north in Eagle Valley. The 865 acres they purchased from Mankins was likely overgrazed by that year, due to California Trail traffic. in 1858, the four men soon sold to William Ormsby, who laid out regular, rectangular plat lines within the valley and named the community Carson City. Ormsby not only established a hotel named the St. Charles in downtown Carson City, but became one of the first and most outspoken advocates of a territorial government separate from that in Salt Lake City. The following year, U.S. Army Capt. James H. Simpson described the small community as having around a dozen frame houses and two stores. Designation as the territorial capital in 1862 spurred more growth and investment in the town, which soon became a hub of mercantilism for northwest

[39] Richard Moreno, *A Short History of Carson City*, (Reno & Las Vegas: University of Nevada Press, 2011), 11; Marshall Fey, R. Joe King, and Jack Lepisto, *Emigrant Shadows: A History and Guide to the California Trail*, (Virginia City, Nev.: Western Trails Research Association, 2002), 123-153; Dangberg, *Carson Valley*, 11-12, 51-53; U.S. Surveyor General, Survey Map, Township 12 North, Range 19 East, Mount Diablo Meridian, 1862, General Land Office Records, Bureau of Land Management, http://www.glorecords.blm.gov/details/survey/default.aspx?dm_id=353268&sid=laih52ei.k0c#resultsTabIndex=1, accessed November 9, 2016.

[40] *Mountain Democrat*, April 5, 1860, in *History of Nevada*, 66-67.

Nevada, as well as a key stop on the Virginia & Truckee Railroad between the Central Pacific line in Truckee Meadows and the silver mines of Virginia City.[41]

Among the best descriptors of Carson Valley as it appeared after the departure of the LDS Church are the so-called "Tennessee Letters," letters written by Richard N. Allen, a correspondent of the *San Francisco Herald* between 1857 and 1860 under the pen name "Tennessee." Traveling over the Sierras via the southern route along the upper Carson River, Allen described his first experience of Carson Valley:

> At first sight this Valley does not appear more than ten or fifteen miles long, and five or six wide; the actual length, however, is thirty miles, and the width eleven. The river runs near the middle of the Valley, the whole length of it, and, with the exception of the willows along its banks, there is no timber whatever in the Valley. The surrounding mountains, however, are covered with pines, and a few cottonwoods and cedars. The soil of the Valley is well adapted to the growth of grains and garden vegetables, and probably no place in California can equal it for grazing; even at this season there is an abundance of grass for fifty thousand of cattle to fatten upon. I have seen no beef in the San Francisco market equal to that furnished by the butchers here.
>
> Of the productions of the soil, I have seen wheat, barley, oats, potatos [sic], and almost all kinds of garden vegetables–all of excellent quality, and produced in the greatest abundance.
>
> The most remarkable feature of the Valley is the great number of beautiful rivulets, many of them large enough to turn a mill, running down from the mountains every few hundred yards. Two grist mills and two saw mills are in constant operation, furnishing flour at ten dollars a hundred, and lumber at twenty dollars a thousand feet.[42]

Allen also noted a unique variety of seven-headed wheat that grew abnormally well in the valley. Despite Allen's observations, and considering the biological and transportation limits of the environment about which he speaks, it is more likely that the ranchers of Carson Valley had already learned of the limited ability of the land to grow produce, not only due to scarce water and harsh climate, but also due to the distance from any suitable market without a fast railroad connection. Such hyperbole was common among observers of the nineteenth century witnessing these landscapes for the first time. Perhaps one of the most important absences in such records as Allen's is his lack of consideration for the Washoe and Paiute native to the region. Since neither the Washoe nor Paiute settled permanently, opting for a series of seasonal campsites throughout the region, Mormon and other Euro-American settlers largely ignored their claims to territory. Allen did, however, document how Washoe and Paiute tribal members adapted to the new economy. Many opted into the farming and ranching economy as a new means of survival, either working on ranches, or, in a few rare cases, making their own land claims and ranching themselves. By the fall of 1857, Allen noted that while the Washoe were considered hostile, many of the local ranchers employed Paiutes as "rancheros" and spoke quite highly of them.[43]

Allen's visit coincided with the departure of the LDS Church from the eastern Sierras and a severe drought in California in 1858. The drought compelled many cattle ranchers to drive their cattle across the Sierra Nevada Mountains and winter them in the lush grasslands of the Truckee Meadows, and of Washoe, Eagle, and Carson Valleys. Most did not establish permanent settlements, instead practicing transhumance grazing, wintering their cattle in the valleys and summering them in upland mountain valleys. Among these cattlemen was Nathaniel

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[41] DCNR-HP&A, Pickett, pp1-2; DCNR-HP&A, Rowley, pp3-4; Hulse, *The Silver State*, pp58-60, 68; Carlson, p71; Moreno, 13, 15-17.

[42] Richard Allen, October 9, 1857, in David Thompson, ed., *The Tennessee Letters: From Carson Valley, 1857-1860*, (Reno: The Grace Dangberg Foundation, Inc., 1983), 2-3.

[43] Allen, October 9, 1857, Thompson, 3 and August 25, 1859, Thompson 79, and October 22, 1859, Thompson, 90, and December 27, 1859, Thompson 105-106.

"Hock" Mason who drove his cattle through the Pine Nut Mountains east of Carson Valley into the neighboring valley along the upper Walker River, establishing a permanent ranch in what would later be named Mason Valley. In 1859 William H. Boyd drove a herd of cattle into Carson Valley and reported to Richard Allen that he found the quality of grazing in Carson Valley to be superior than that in the Central Valley on the opposite side of the Sierras, compelling more ranchers to come to the valley. On the heels of this migration, Richard Allen noted that the valley was already overgrazed by October of 1859. Adding to the grazing woes was the loss of timber from over-logging (and a general scarcity in the valleys to begin with), leading many ranchers in the valley to construct relatively small homes. Allen also noted that cramped apartment living was not unusual in Genoa.[44]

Lamenting the impact of cattle and sheep grazing on the landscape, and the influence of the harsh winter of 1859-1860, Richard Allen observed as part journalist, part booster, and part social critic in January of 1860 that:

> Of the five hundred square miles of land in Carson Valley, probably one-third is susceptible of cultivation, and has water at hand for artificial irrigation. About one-half of this is already claimed, and about one-tenth occupied, a claimant generally not being satisfied with less than from one to two thousand acres. Wheat, corn, oats, barley, potatoes, etc., can be produced, with a little industry, in great abundance, but owing to a most reprehensible aversion to physical exertion on the part of the old inhabitants, nothing of any account has ever been raised, except cattle. It is to be hoped, however, that the present severe winter, by destroying more than half the stock, will have a tendency to drive the graziers to the more honorable, though more laborious occupation of tilling the soil, an occupation which, as it is more essential than any other to the necessities and comfort of man, has been considered, in every age and among all nations, the bulwark of patriotism and private virtue. On the other hand, I have observed that the business of cattle raising, as practiced by our frontiersmen, has the effect of brutalizing and degrading the human race almost to a level with their herds.[45]

Allen spent very little time describing Eagle Valley to the north, but made some limited observations in 1860, well after Eagle Station had grown into the small town of Carson City:

> Eagle Valley is situated fifteen miles north of Genoa, it is nearly circular in shape, and about twenty miles in circumference. It is watered by several small streams rushing down from the mountains, but the soil, I am told is not so productive as ours here in Carson. Carson City is in this valley, at the junction of the Honey Lake and Washoe trail and the great immigrant road [the California Trail]. This great city is remarkable as being the place of residence of the eminent statesmen of western Utah, men who are eternally getting up meetings and creating offices for their own use and benefit. Only last week they went to work to organize a municipal government for Carson City, a mere village that no honest geographer would notice upon a map of a hundred acres.[46]

Some ranchers attempted to save their cattle by driving them to other areas of the territory, including Henry Van Sickle who drove a herd to Owens Valley, although the Paiute confiscated many of the animals, claiming trespass. Despite the harsh winter and the loss of livestock due to poor forage, farmers and ranchers in Eagle and Carson Valley recovered their finances fairly quickly due to the increasing price of goods after 1859. The silver strike on the Comstock Lode in that year transformed the ranching and agriculture industry of northwest Nevada, and set the stage for ongoing competition over water between the industries along the Carson River that persisted until the twentieth century. As thousands of hopeful prospectors rushed to new mining towns east of Eagle Valley like Virginia City, Silver City, and Gold Hill, nearby entrepreneurs such as the Dangbergs established or expanded ranching operations to provide food to the new residents. Initially, this expansion began without formal government oversight at the local or territorial levels. Most residents referred to the region innocuously as "Washoe," even after the strike and subsequent mining rush beginning in 1860, but the hub of

[44] Allen, August 25, 1859, Thompson 79, and October 22, 1859, Thompson, 90, and December 27, 1859, Thompson 105-106; DCNR-HP&A, Pickett, p2.
[45] Allen, January 6, 1860, Thompson, 107.
[46] Allen, January 6, 1860, Thompson, 108.

mining activity was in the community of Virginia City. The growth in population and availability of precious metals compelled Congress to separate the region from Utah, declaring it Nevada Territory in 1861, and accepting it as the 36th state just three years later. The massive influx of people meant the demand for supplies rose significantly, providing an easy market for upper Carson River farmers and ranchers.[47]

With local demand drastically increasing by 1860, ranchers in Carson and Eagle Valleys saw demand and prices for their goods increase dramatically. Dairy products featured prominently, with Army surveyor Capt. J.H. Simpson observing that the rich gold-colored butter of Carson Valley fetched a higher price throughout the region, including in California. Henry Dangberg and other area ranchers held their hay later in the year for sale to new prospectors, capturing prices up to $400 a ton. However, a severe winter in 1859-1860 killed off a significant percentage of the beef and dairy cattle in the area. The subsequent rise in beef prices spurred immigration to the region, with some seeking silver wealth in the Comstock while others sought to establish new farms and ranches. The farming community of Sheridan was among those that sprang up during this growth. The first ranchers in Sheridan had been Ben Palmer, a highly successful African American rancher, and his white brother-in-law David Barber. By 1860, a small village had formed nearby around Moses Job's store next to the Barber's ranch stead, but Job sold quickly to J.W. Haines and I.W. Duncan in 1861. Also in 1860, Winfield and Sophia Miller, a black family, moved with their children to a ranch just south of Palmers. Although Winfield passed away soon after, Sophia remained to operate the ranch after his death. These new operations developed quickly along the Carson, Truckee, and Walker Rivers, and by 1861 farmers and ranchers as far away as fifty miles from Virginia City began raising beef and dairy cattle, sheep, horses, grains, and produce to ship to Virginia City and its surrounding mining and milling communities. G.W.G. Ferris constructed a ranch complex with the assistance of the Dangbergs in 1865, approximately one mile southeast of Genoa. Most farmers in the valley focused on dairying, grain, and hay production for the nearby mining communities, however, a few ranchers, including Henry Van Sickle, retained their cattle herds of several hundred to several thousand.[48]

Eagle Valley's expansion was concurrent with this trend, although to a lesser degree. Matthew C. Gardner arrived in the valley in the early 1860s, and by a decade later, had amassed a 300-acre ranch south of Carson City's center, one of Eagle Valley's largest, that included a large sawmill. It was located near Stewart Street and South Carson Street, approximately where the U.S. Forest Service office is at present. Farther to the south, Ormsby County officials established the Ormsby County Poor Farm along Clear Creek Road as an option for less fortunate travelers and residents who needed work and a place to live. There was a dormitory-like building and nearby farmlands. In 1965, the property was transferred to Carson City, which razed most of the complex except the cemetery, and established Fuji Park.[49]

The need for labor and the economic opportunities afforded by the growing market attracted immigrants from across the globe to work in mines and their supporting industries. Carson Valley in particular developed an enclave of German, and some Danish, immigrants who farmed in the valleys and sold their produce in the neighboring mining towns. Among the most revered and successful of these was Heinrich Friedrich (Fred) Dangberg. Fred Dangberg was born in the Halle province of Westphalia, Germany, in 1830, and came to Carson Valley in 1853. He was one of the first of many Germans from that region that would immigrate to Carson Valley over the next several decades, including his brothers August and Christoph, who arrived in the valley in 1859 and 1864 respectively. Dangberg arrived expecting, as did many others, to search for gold and silver. However, also like many others, he found more profit in settling down and producing supplies for travelers, establishing a small station along the Carson Trail with his business partner, Ben Mast, and selling dairy supplies. Dangberg claimed his first parcel, consisting of 320 acres, in 1856 under the auspices of a local

[47] Dangberg, *Carson Valley*, 122; Hulse, *The Silver State*, 71.
[48] Walton-Buchanan, 39; Dangberg, *Conflict on the Carson*, 138-139; Dangberg, *Carson Valley*, 63, 102, 110; Land patent to August Frederick Dressler, May 10, 1866, General Land Office Records, Bureau of Land Management, http://www.glorecords.blm.gov, accessed November 2, 2016; Survey plat map for Nevada TS 12 N, R 19E, 1862, General Land Office Records, Bureau of Land Management, accessed November 2, 2016; *The Historical Nevada Magazine*, 84.
[49] DCNR-HP&A, Pickett, pp3-4; Moreno, 81-82; Walton-Buchanan, 107; Townley, *Alfalfa Country*, 22.

land committee. Dangberg selected a parcel near what is now the western edge of Minden, a site later known as the Klauber Ranch, on which he built a small cabin and began irrigating pasture land for cattle. However, in the spring of 1857, Dangberg lost his claim after a dispute with Genoa strongman William B. Thorington, an event that provides a vignette into the shaky land ownership that existed prior to the establishment of the state's land office in 1865. Later that year, Dangberg and Mast joined with Charles Holbrook, acquired a 640-acre tract on the middle branch of the Carson River, and built a two-room log cabin that is now a portion of the main residence at the Dangberg Home Ranch (NRIS# 80002466).[50]

As they successfully profited from selling supplies to travelers, Dangberg, Mast, and Holbrook steadily acquired additional lands. In an 1858 letter to his brother August, Fred Dangberg mentioned that he and his partner had:

> …bought 112 head of cattle, of which 65 are grown cows and all will have calves during the summer. 25 head are one-year-old cattle and the rest are oxen from one to three years old. Already this winter we have 10 young calves from the cows. If we have luck it could be that this year we will raise 75 to 90 calves. We have also about 100 head of cattle from another man which we will keep and watch for one year for which he will give us half of the calves which we raise on them.[51]

That year, they also increased their irrigating acreage to 918 acres, and Mast and Dangberg purchased Holbrook's interest in their cattle company. Mast and Dangberg then purchased an additional 250 acres from the Dettenriders and Thomas Anderson west of their claim, providing them access from both the east and west forks of the Carson River for irrigation and bottomland pasture. However, Mast returned to Pennsylvania that year, and Dangberg sought assistance from his family members who still resided in Germany. Concerned for his safety and seeing economic opportunity in expanded cattle ranching, Fred Dangberg hoped not only to secure their labor but to have them claim additional acreage under existing land laws to generate more pasture for his growing cattle herd. His brothers August and Christian joined him by 1863, and helped recruit a small but steady supply of laborers from Germany, many of whom later became ranch owners themselves. Together, the Dangbergs developed what would become one of the largest ranching operations in western Nevada by the early twentieth century.[52]

Aside from the Dangbergs themselves, the Dresslers became an equally powerful force in the ranching community, having established their own sizeable operation in the southern portion of Carson Valley along what became known as Indian Creek. August Frederick Dressler arrived in the valley from Muhlhausen, Germany in 1860, and first worked on the farm of Bishop Jones before purchasing his own ranch which was (and remains) headquartered near the California-Nevada border in southern Douglas County. August and his wife Wilhelmena purchased several acres of bottomland near the site of present-day Gardnerville, Nevada. By 1866 they had also purchased 80 acres of public land on what became the best known of the Dressler ranches, now located on Dressler Lane in Douglas County west of State Highway 88. August and Wilhelmena were able to acquire several neighboring ranches including portions of the Marsh and Mack ranches south of Gardnerville, as well as a property in Sheridan where he operated a blacksmith shop. In 1879, Dressler constructed a small reservoir above and southeast of his main ranch site, named Mud Lake. By 1893, he had expanded the reservoir significantly to a capacity of 3252 acre-feet of water for Dressler's pasture and crops. By 1913, the Dressler family had built the ranch into a sizeable operation that included much of the southern end of Carson Valley on both sides of the Nevada-California border.[53]

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[50] Steve Achard and Conrad Buedel, *Lost Legacy of Carson Valley: The Rise and Fall of the H.F. Dangberg Ranching Empire*, (Minden, Nev.: Dangberg Partners, LLC, 2011), 12; Holly Walton-Buchanan, *Land of the Buckaroos: Historic Ranches of Western Nevada*, (Reno: Jack Bacon & Co., 2013), 34-35, 39; Achard and Buedel, 28-29.
[51] Letter from Fred Dangberg to August Dangberg, January 13, 1858, in Achard and Buedel, 33-34.
[52] Walton-Buchanan, 34-35, 39; Achard and Buedel, 28-29, 36.
[53] Land patent to August Frederick Dressler, May 10, 1866, General Land Office Records, Bureau of Land Management, http://www.glorecords.blm.gov, accessed November 2, 2016; Walton-Buchanan, 39; Dangberg, *Conflict on the Carson*, 138-139;

Although the Dangbergs and Dresslers are arguably the best known of Carson Valley's ranchers, dozens of other successful ranchers established operations throughout the valley in the 1850s and 1860s. Several California ranchers chose to drive their cattle into Carson, Eagle, and Washoe Valleys and the Truckee Meadows beginning in 1858, some of whom opted to establish permanent ranching operations there. Also by that time, German immigrants, many of them learning of the success of early farmers like Dangberg and Dressler, or having worked for them for a time, settled in the valley and began ranches of their own. By 1858, Abraham Klauber immigrated from Bohemia and purchased several tracts, including Fred Dangberg's 1856 claim that had been jumped by Thorington. Klauber also established stores to sell supplies in Carson City and Genoa. Other well-known ranchers arriving in the 1860s included G.W.G. Ferris, who would later invent the Ferris wheel, and who constructed a ranch complex with the assistance of the Dangbergs in 1865, approximately one mile southeast of Genoa. Most farmers in the valley focused on dairying, grain, and hay production for the nearby mining communities. However, a few ranchers, including Henry Van Sickle, retained their cattle herds of several hundred to several thousand. Frederick William Stodieck arrived in 1864 from Halle in Westphalia, Germany, bringing his wife Catherine Schulte, along in 1868. By the end of the 1870s, names such as Springmeyer, Lampe, and Hussman, had become established leaders in Carson Valley's agricultural network. Crop reports from the 1860s revealed that Douglas County was producing over 20,000 tons of hay, 20,000 bushels of wheat, 40,000 bushels of barley, 15,000 bushels of oats, 1,000 bushels of corn, and 5,000 bushels of potatoes a year.[54]

The presence of so many mining and farming communities and the exchange of goods among them necessitated the creation of enhanced infrastructure. A toll road stretched south from Carson City through Carson Valley to Aurora in Esmeralda County. To provide for easier transportation between the Tahoe Basin and Carson Valley, D.D. Kingsbury and John McDonald constructed the Kingsbury Grade toll road from Van Sickle's Station west over the Sierras to Shingle Springs in California in 1860. By 1863, that road alone had collected a total of $190,000 in travel receipts with nearly a thousand wagons per month passing through Carson Valley. Henry Van Sickle eventually purchased the road from Kingsbury and McDonald, and later sold it to Douglas County in 1889. These roads allowed for greater economic development in the valleys, but also shifted where that development occurred. Genoa, formerly the seat of activity in northwest Nevada, became peripheral to Carson City, as the roads bypassed the small town, keeping overland travelers and commercial wagon traffic in the central portions of Eagle and Carson Valleys.[55]

The influx of new farmers and ranchers created particular problems for the fledgling territorial government established in Carson City in 1861, specifically in land and water law. By the time of Nevada Territory's establishment, land law in the area was generally based on prior appropriation, meaning the first to settle and use land was considered the rightful owner. By contrast, the state distributed water flow by need with priority mostly given to mining interests, creating a complex web of rights and laws that would continue to aggravate economic development in the region. The establishment of the territory meant that the federal General Land Office placed a district office in Carson City to survey existing land claims and future areas for settlement within the territory. During this transitional period, many farmers and ranchers faced a great deal of uncertainty regarding their land claims. With the federal government dealing with land survey, the state government focused on the task of regulating and distributing water supplies within the state, especially the logging, mining, and agricultural interests competing for the same flow from the Carson River.[56]

Dangberg, *Carson Valley*, 7, 63, 102, 110; Fred Dressler, *An Interview with Fred Dressler: A Contribution to a Survey of Life in Carson Valley, From First Settlement Through the 1950s*, by R.T. King, (Reno: University of Nevada Oral History Program, 1984), 2-4; Robert A. Allen, "Map of Carson Valley Lands, Douglas County, Nevada," NC97 Robert Allen Papers, UNR.

[54] Walton-Buchanan, 39; Dangberg, *Conflict on the Carson*, 138-139; Dangberg, *Carson Valley*, 7, 63, 102, 110; Elliott, *History of Nevada*, 116; Survey plat map for Nevada TS 12 N, R 19E, 1862, General Land Office Records, Bureau of Land Management, accessed November 2, 2016; *The Historical Nevada Magazine*, 84.

[55] Achard and Buedel, 42; Dangberg, *Carson Valley*, 12.

[56] Townley, *Alfalfa Country*, 42.

As with most western agriculture, the availability of water and its regulation by state and local government controlled the development of farms and ranches in Eagle and Carson Valleys. Agriculturalists found the region's climate generally arid, with heavy snowmelt from the Sierra Nevada Mountains helping to keep the water table high. However, irrigation remained necessary to convey snowmelt from the river channel to fields to insure a season's crops due if rain was lacking. Under early governance, water in the Carson and Eagle Valleys was appropriated by need, not prior use, which left competing interests to determine their need without much regulation. Without a clear system of appropriating water, many ranchers established brush dams along creeks and rivers indiscriminately. Logging companies eager to supply timbers to the underground mines near Virginia City sought to use the Carson River and its tributaries for transporting lumber downstream. Finally, the milling companies themselves sought to divert water from the Carson to power their operations and process ore for ease of transportation. Despite the disparate demands placed upon the Carson River's water supply, early Douglas County administers had high hopes for the area's agricultural potential. In 1868, Douglas County Assessor S.C. Chase estimated that there were 50,000 acres of agricultural lands in the county, a seemingly accurate estimate considering that in 2017, after withdrawals for residential and light industrial development, the county still boasts 33,272 acres of agricultural land.[57]

In 1861, the territorial legislature first attempted to regulate the competing interests in the Carson River's water with targeted legislation. Territorial officials restricted commercial fishing along Nevada's riverways, specifically banning any nets, seines, traps, or other devices that might obstruct the flow of water. They also authorized improvements to the Carson River channel to expedite log drives for timber companies, but required the protection of existing irrigation dams, solidifying their actions and showing the focus of the territorial government's attention on the Carson River, the legislature declared the Carson River unnavigable, ensuring the state's authority to regulate the river without federal involvement, despite the passage of logs and work boats across the state line. The next year proved a difficult balance between the two interests, aggravated by what was historically known as the Great Flood of 1862. In December of 1861, heavy snows fell across the western United States, from Oregon south into Sonora, Mexico, and inland from the west coast to Utah and New Mexico. Winter rainfall and a wet spring proved especially destructive throughout the season. The Carson River swelled and flooded its banks in January of 1862, destroying bridges, houses, and livestock. The flooding continued to a lesser degree into the spring as warm temperatures and heavy rainfall sent snowmelt into the Carson River watershed earlier and faster than normal. That spring, as loggers began using the Carson River to transport their milled lumber, lumber waste began floating over the lumbermen's booms and dammed the river's sloughs and ditches completely, forcing water into neighboring fields and spreading sawmill debris in its wake. During the second territorial legislature in 1862, the Assembly and Senate acted to require lumber companies to address this and prevent clogging of irrigation canals and ditches, but exempted the mining mills downstream. Amid this negotiation among interests, many ranchers began to fence their property to delineate their land-holdings more clearly and protect their property and crops from free-grazing livestock, Fred Dangberg's original 910 acres by 1861. However, Nevada's legislature remained silent on the issue of fencing and open range grazing until 1893.[58]

The canals and ditches constructed by logging, mining, and agricultural interests throughout Carson and Eagle Valleys aggravated water litigation and the Nevada legislature's attempts to address it. To provide water power for the burgeoning milling industry in Dayton and Empire, milling companies purchased or constructed existing ditches and conveyances to provide power. Various companies converted the 1858 Rose Ditch into a canal for powering four mills at the mouth of Gold Canyon in Storey County. In 1860, the newly formed Virginia Ditch Company in Carson Valley made plans to construct a canal along the West Fork of the Carson that would stretch from Hope Valley downstream to the mills at Empire east of Carson City. A Virginia Ditch still exists in Carson Valley, completed in 1863, but it diverts water from the East Fork above Gardnerville and now serves

[57] Walton-Buchanan, 36; Townley, *Alfalfa Country*, 2, 41; *2011 Douglas County Master Plan*, Chapter 2, Land Use Element, 16, http://www.douglascountynv.gov/DocumentCenter/View/2494, accessed June 30, 2017.
[58] Walton-Buchanan, 36; Townley, *Alfalfa Country*, 2, 41-43; USDA-SCS, 4-5; Achard and Buedel, 42; Gary McCuin and Steve Foster, "Nevada Open Range Law," Fact Sheet 10-69, University of Nevada Cooperative Extension, 2010, https://www.unce.unr.edu/publications/files/ag/2010/fs1069.pdf, accessed May 9, 2017.

farmers rather than millers. Among the premier agricultural ditch builders was Henry F. Dangberg, Sr., who constructed or aided in the construction of dozens of ditches throughout Carson Valley. As irrigation networks in western Nevada refined, they supported some 45,000 acres of irrigated cropland. The expanded tilled acreage grew crops such as potatoes, vegetables, and fruit, and led to the development of processing industries in nearby towns such as flour milling and butter and cheese production. The competition between mining and agricultural interests for Carson River water stemmed in part from corruption in the state legislature in favor of mining interests, but also because the agricultural industry itself was vastly overshadowed by the mining industry in terms of how many people it employed and how it was supplied. Nearly 15,000 residents in Storey and Lyon counties depended on mining for their income through the 1860s, compared to less than 1,000 in Douglas County.[59]

While millers, loggers, and farmers all competed over the Carson River's water, the river itself proved difficult to control. Prone to winter flooding, the history of the Carson River reads as a periodic litany of destructive floods from the arrival of Euro-American settlers in the 1850s through to the present. Even in these early years, farmers and ranchers sought to control a river that frequently flooded its banks, wrecking fields, fences, buildings, and equipment across all three industries. After the disastrous floods in the winter of 1861-1862, the community tasked Henry Van Sickle, being the primary landowner along the West Branch of the Carson River's lower extent, with constructing the first flood control dam, specifically to compel the waters of the West Branch to remain in the channel during floods rather than deserting the channel and flooding over to the East Fork. Van Sickle's dam provided some protection, but the force of the river's water periodically compelled the West Fork to shift its channel and its junction with the East Fork. Many of these floods were wet-mantle, rain-on-snow, or frozen ground floods in colder parts of the year that became especially destructive as water-logged soil and ice exacerbated flooding throughout the valleys. These floods continue into the present, with the most recent episodes occurring in the winter and spring of 2017.[60]

Alongside flood management, new farmers and ranchers had to contend with the ubiquitous sagebrush, clearing the plants so the land could be used for hay production or pasture. Fred Dangberg developed a successful method for clearing sagebrush by flooding his fields to drown the sage, and then clearing it while the soil was still moist, allowing for the unobstructed planting of hay and grain crops. In addition to these mainstays, some farmers engaged in vegetable and fruit farming, although the climate limited what crops could be grown profitably. Thompson & West's 1888 *History of Nevada* elaborated that "the first thing after building a shelter, the farmer sets out an orchard." Many planted orchards soon after establishing their operations as the trees took several years to produce fruit. Vegetable crops required closer attention, and careful tilling and plowing to prepare fields for seed. On many farms and ranches, vegetable crops were overseen by the matron of the ranch, with assistance from children. However, late frosts in summer tended to wreak havoc on orchards without careful management, and generally reduced yields. For that reason, gooseberries, raspberries, strawberries, and currants, which perform better in colder environments, became more popular fruit crops for regional farmers. Although markets were local, such as Carson City, Virginia City, and Dayton, these still required most of a day for travel using horse-drawn wagons. Produce farmers relied on cutting ice in winter and storing ice blocks in ice houses on their property over the summer to guarantee their produce crops would stay cool and fresh to market.[61]

Although beef cattle remained the mainstay, dairying took hold early among area ranchers as a much sought after commodity in local markets. Owners of larger operations such as the Dangbergs eventually constructed special dairy barns on their property, often stone buildings that remained cool in the summer with the assistance of ice cut from mountain lakes in the winter and stored in underground ice houses. Most dairy farmers did not have the finances or resources to construct stone barns, and sent their milk to creameries in Carson or Eagle valleys. The creameries processed milk into cream, butter, and cheese for sale in nearby groceries and

[59] Townley, *Alfalfa Country*, 151-152; Dangberg, *Conflict on the Carson*, 21, 28.
[60] Dangberg, *Conflict on the Carson*, 20-21; USDA, SCS, 4-55; Dangberg, *Carson Valley*, 40.
[61] Walton-Buchanan, 106-107; Achard and Buedel, 36,41; *History of Nevada*, 135, 374.

restaurants. Dairying in Carson Valley remained fairly low-key if steady until 1879 when the use of pedigreed Durham shorthorns became preferable by many dairy farmers, led by the example of J.W. Marsh. Marsh and his sons Wilbur and William arrived in the valley in that year and operated a ranch at the present-day southeast corner of State Highway 88 and Dressler Lane. According to valley historian Grace Dangberg, the Durham stock from the Marsh herd became the breeding base for much of the valley's dairy livestock after 1880. However, the Marshes sold in 1887 to the Dresslers, who later sold it to Dietrich Thran. It was Thran who, in 1914, built the house currently standing on the property. Alongside the rise in dairying in Carson Valley by the 1860s, alfalfa became a popular feed crop on the irrigated pastures in the valley.[62]

The combined production of hay, grains, dairy, beef, and produce, and the development of roads throughout the region to transport them, allowed for a marked expansion of agricultural development along the Carson River between 1864 and 1866. While the established Virginia City and Dayton markets remained strong, new markets to the southeast in Aurora and Pine Grove provided additional demand. Grace Dangberg argues that it was this southeasterly avenue of demand that led to settlement and irrigation along the East Fork of the Carson River in Carson Valley, settled by families such as the Settelmeyers, Christiansens, Springmeyers, and Heidtmans. Staples such as alfalfa, bread, flour, butter, cheese, potatoes, and beef drove mining-focused agriculture. However, many farmers, especially those with farms in the valleys close to the Comstock, also produced luxury fruits such as raspberries, blackberries, peaches, and gooseberries,. Due to the high demand and price for fruit, orchards became a standard part of most farms and ranches in Carson and Eagle Valleys that persisted into the early twentieth century. However, the quick decline in silver prices by the 1870s meant that many had not come into full bearing before their local markets had failed, meaning most were used for family subsistence.[63]

Despite the importance of local agriculture to the neighboring mining communities, competing water interests continued to plague the state legislature and area farmers and ranchers. In another effort to clarify competing demands, the state legislature passed a law in 1866 requiring the recordation of changes to waterways such as irrigation systems with their respective county recorders. This precipitated a proliferation of water rights litigation between mining and ranching interests, aggravated by serious drought in the early 1870s. Water became so scarce in 1872 that William Sharon, one of Nevada's premier silver magnates and the majority shareholder in the Union Mill and Mining Company, ordered his crews to remove dams along the Carson between the California state line and the mill storage ponds in Empire. The following year, the drought became so severe that work stopped in the mills, even though new silver discoveries had been made near Virginia City. Some mining leaders considered water storage along the Carson River, but a wet year in 1874 and continuous strong precipitation through 1882 temporarily quelled concerns over sufficient water.[64]

Despite the relief provided by wetter weather beginning in 1874, the shortage of water in 1872 and 1873 spurred sufficient unrest over water use to prompt litigation between milling companies and agriculturalists, providing important insight into the agricultural developments over the region's first two decades of development. With William Ralston and his colleagues in control of the Union Mill and Mining Company, they consolidated not just 16 quartz mills, but the Virginia & Truckee Railroad and the Carson and Lake Tahoe Lumber Company under the Union Company umbrella. This provided them with a horizontally-integrated economic platform with which to reap financial returns but also to use as political and legal leverage. The Union Mill and Mining Company filed suit in 1872 against an array of ranchers along the Carson River, hoping to secure greater water rights for their struggling milling operations in Empire and Dayton. The testimony of that case provided detailed descriptions of several ranching operations and their water use. Among the defendants was Henry Dangberg who described his ranch at the time as follows:

> The soil upon said land is sandy loam. The land is agricultural and grass land. It produces grass, grain and vegetables. It is principally hay land. There is in the neighborhood of 1000 acres of grass land. The

[62] DCNR-HP&A, Pickett, pp3-4; Moreno, 81-82; Walton-Buchanan, 107; Dangberg, *Carson Valley*, 110.
[63] Dangberg, *Conflict on the Carson*, 2; Walton-Buchanan, 36; Achard and Buedel, 36, DCNR-HP&A, Pickett, p4.
[64] DCNR-HP&A, Pickett, p4; Townley, *Alfalfa Country*, 2.

balance is grain land. It will not produce without irrigation. It will produce with water. There is no other source from which water can be obtained except from the Carson River and its branches…Both the East and West Forks of the Carson River and all their branches run through this land. The streams are generally known as the East Fork, Fred's Fork, Cottonwood Slough, the West Fork, and Brockliss Slough. The whole of this land with the exception of about one acre is enclosed. It has been enclosed since 1861. Benjamin Mast, C.E. Holbrook and myself located 960 acres of the land described in the answer in August, 1857. About 250 acres of this land was located and claimed by Mott prior to 1857. The balance of the land was occupied, located and claimed in part by Deitenrider and in part by Lightle and Bormer as early as 1860. I now have the title in fee to the whole of this land.

To my knowledge, water was first used upon this land for irrigating purposes in the spring of 1858. All the water necessary to be used was used upon said land in the year 1858. I have continuously from year to year since 1858 used what water was necessary to irrigate this land and the crops grown upon it. There has been raised crops on said land each year since 1858. The average crop of hay cut since and including 1860 has been from 1100 to 1200 tons. The land has been irrigated partly by artificial ditches and dams, partly by open dams and partly by the natural overflow of the stream.

The land slopes each way from the natural bank, so that the water will flow from the banks east and west and north and south. The river channels are wider than in early years. The willows have been cut away from the banks and we cannot now turn water out of the river by the simple method formally used. There are great many dry channels or depressions made by washes or overflows in former years on this land. These are overgrown with grass now and form channels for the conveying of water over the land. The surplus water not consumed by vegetation finds its way back into the river by means of ditches and sloughs upon the surface or by seepage. There is no waste of water upon this land. What is not permanently absorbed, is taken back into the river.

It will require 250 inches of water to irrigate 100 acres of grass land upon an average, as the water would naturally flow over the surface of the land constantly. The water would be required for irrigation in this quantity during the months of April, May, June and July, after which it would require about one half as much during August, September and October. My estimate of the quantity of water required for irrigating this land is without pressure, a surface flow with the fall of the country. It will require less water for grain. My judgment is that about one half of the quantity required for grass land is necessary for grain.

Water was first turned out of the river upon this land by artificial means in the spring of 1858… This ditch was about 18 inches wide and three feet high. The water was next taken out through a ditch at the head of the island to irrigate the land, in the spring of 1860. This ditch except at the head, is still in use. This ditch is and was about two feet wide and three feet deep on an average… since 1857, we have in conjunction with these ditches used brush and open dams to turn the water out of the river upon this land.

During all the time since 1857, my right to use or my use of the waters of the Carson River has never been questioned by any person or persons except in this suit, and the suit of the Merrimac Mill Company in 1865, which latter suit was dismissed by stipulation. I also used, in conjunction with Ferris, the ditch known as the Lightle ditch… This ditch has been used since the year 1860, and has been continuously used during the irrigating season.

I obtained interest in this ditch and the right to use water by the purchase of a portion of the Lightle and Bormer land, for the irrigation of which, the ditch was constructed.

Litigation throughout the state in the 1860s and 1870s generally resulted in favorable outcomes for mining interests. Generally, wet years produced no conflicts, but resulted in bitter disputes during dry summers. In Carson Valley, the mines hired watermasters to control the ditches and headgates, ensuring that adequate water went to the Carson City-area mills, but often leaving farmers and ranchers in the valley with little pasturage.[65]

[65] Achard and Buedel, 63-65; Townley, *Alfalfa Country*, 12; White, *A New History of the American West*, 265-266.

In Carson Valley, the drought combined with the economic Panic of 1873 to force many original farmers and ranchers out of business. Stock numbers and acreage under cultivation show a sharp decline during this period. In Douglas County, cattle dropped from 5,801 to 1,590 between 1873 and 1874, and sheep declined from 4,000 to 1,900 head between 1873 and 1875, and cultivated acreage declined from 19,553 to 3,760 between 1874 and 1875. To the north in Ormsby County, cattle numbers dropped from 1,128 head in 1874 to 460 in 1875, although cultivated acreage remained fairly steady. While these numbers recovered by 1880, they signaled a serious loss for most area ranchers that forced them to sell their ranch steads to newcomers. German immigrants from Verden in Hanover and from Schleswig-Holstein, as well as Italians, and by the 1880s, Basques, purchased most of these failed ranches at low market prices, or acquired new land from the public domain. Among the Germans to follow the Dangbergs and Dresslers were the Settelmeyers, who arrived in Carson Valley in 1880 and began working for the Dangberg family before purchasing their own ranch in 1888. With the mines mostly shuttered by this point, many ranchers such as the Springmeyer, Dangberg, and Hussman families resorted to primarily sheep and beef cattle ranching by the 1870s as a means to remain competitive in the region. Dangberg recruited young men from Germany to work on his farm, and to become citizens and claim land under the 1862 Homestead Act, with many of these claims eventually being acquired by Dangberg himself. The Ferris family, into which Henry Dangberg would marry, established a dairy ranch in the north end of Carson Valley by 1864, later moving to Carson City in 1869 into a house at what is now 311 South Division Street (NRIS #79003438). These early families were the forerunners of a concentrated German-American agricultural community that thrived in Douglas County's two central towns of Gardnerville and Minden. For Fred Dangberg's part, he would come to amass nearly 25,000 acres of land in Carson Valley, including a home on Main Street in Genoa, running thousands of head of sheep and cattle and controlling or having an interest in most of the valley's irrigation systems. Access to national markets via the Virginia & Truckee Railroad allowed farmers and ranchers in the area to stay in business provided they shifted production into fewer varieties of higher volume crops or livestock, such as beef cattle, sheep, and alfalfa. A brief respite from these limitations came after the gold discoveries in Bodie, California that provided a temporary market to the south in the late-1870s via the so-called Desert Road. By 1875, the *Carson Valley Times* remarked that the valley's farms retained some 20,000 acres of fenced, irrigated fields along with 3,500 fruit trees, and an array of berry bushes, all of which now depended on the few remaining residents of nearby mining towns, but mostly on Bodie, for economic activity.[66]

The 1880 Surveyor General's report noted that Douglas and Ormsby Counties were well-established as fruit and nut producers for these markets:

Number of Trees/Vines producing fruit/nuts in Douglas & Ormsby Counties, 1880		
Tree/Vine	Douglas County	Ormsby County
Gooseberry	10,000 vines	1,000 vines
Raspberry	10,000 vines	1,200 vines
Strawberry	6,000 bushes	2,500 bushes
Gravevine	50 vines	50 vines
Fig	0 trees	6 trees
Walnut	50 trees	12 trees
Almond	0 trees	0 trees
Apricot	60 trees	60 trees
Cherry	469 trees	610 trees
Plum	670 trees	650 trees
Peach	540 trees	5,700 trees
Pear	433 trees	62 trees
Apple	2,468 trees	5,700 trees

[66] DCNR-HP&A, Rowley, p5; Walton-Buchanan, 37-38; Achard and Buedel, 43; Glass, *Fred Settelmeyer*, 1-2, 10-11; Dangberg, *Conflict on the Carson*, 3, 21; Bancroft, 255; Douglas County Planning Department, *The Architectural Heritage of Carson Valley: A Survey of Genoa, Minden, & Gardnerville*, (Minden, 1981), 9; *History of Nevada*, 139-140.

At this time, Genoa remained the seat of government and commerce in Carson Valley. To the north, the capital city of Carson incorporated from Ormsby County in 1875, boasting by that time a sizeable business district, and satellite communities elsewhere in the county including Brunswick, Empire, Lakeview, and Clear Creek. Despite the periodic shortages of water, irrigation and railroads proved to be critical to allowing Carson River farmers to succeed, even when shrinking markets reduced prices.[67]

The respite offered by the Bodie discoveries allowed for continued mercantile development in Carson Valley. However, with the market drawing southeastward, entrepreneurs established the town of Gardnerville in 1879 near the eastern side of the valley, drawing economic activity away from Genoa, which witnessed a steady decline of investment over the 1880s and 1890s. Beginning with the establishment of the Gardnerville Hotel by Lawrence Gilman in 1879, Gardnerville saw modest growth for the next two decades. By 1900, the newer town's main street boasted two livery stables, a woodworking shop, a boarding house, a tin shop, three general merchandising stores, a hall, four saloons, one meat market, one furniture store, a drug and confectionary store, and two hotels. In 1885, signaling the concentration of Germany immigrants in the area, various community leaders formed the Valhalla society to pass on information to newly arrived immigrants. Part of Gardnerville's economic successes hinged on its access to regional roads through Carson Valley that now looked at Genoa as too far from the main travel corridors. During the Bodie mining revival over the 1880s, Gardnerville was a resupply and rest hub for 24-horse-a-day freight teams on their way to the Virginia & Truckee Railroad terminus in Carson City. Also drawing economic energy from Genoa was Sheridan to the south. Although still small, Sheridan boasted a store, two hotels (including the Sheridan Hotel), a post office, a saloon, and a blacksmith and wagon shop.[68]

The momentum afforded by the railroad and by the Bodie market allowed area farmers to expand their network of irrigation canals and ditches throughout the 1870s. The 1874 Surveyor General's report notes that Douglas County had 35 ditches irrigating 18,953 acres, and Ormsby County had 5 ditches irrigating 1,100 acres. In 1875, Henry Dangberg added the Pinenut Creek Ditch to this network as a mechanism for accessing flood waters from this wash along the east side of Carson Valley. In 1876 he constructed the Ezell Ditch, siphoning water from the Cottonwood Slough along the East Fork, and acquired an interest in the Allerman Canal, which siphoned water directly from the East Fork. A collection of ranchers constructed the New Virginia Ditch to provide enhanced irrigation capacity for the existing ditch, siphoning water from the East Fork of the Carson two miles below the Allerman diversion. In 1877, the Dangbergs acquired the Gott Reservoir east of the East Fork, which became the first in a series of reservoirs constructed by the family to capture and store water from the Pine Nut Mountains. In 1878, the Dangberg family constructed the Buckeye Creek Ditch, which captured run-off water from Buckeye Creek, another waterway that was dry most times of the year except during rain events. This relatively rapid expansion of irrigation systems and irrigable acres would aggravate conflicts between Carson Valley agriculturalists and mill owners downstream during the next drought period of the 1880s.[69]

1880 to 1893 – Economic Adaptation to Downturn and Drought

The declining returns from gold and silver mines in settlements like Virginia City and Aurora starting in 1877 forced a transformation of the agricultural industry in Nevada. As mentioned previously, the link to the transcontinental railroad provided by the Virginia & Truckee Railroad after 1869 provided agriculturalists with a much-needed link to more diverse national markets like San Francisco and beyond to sustain their operations as nearby towns shrunk. Running from its junction in the relatively new town of Reno to a major depot in Carson City provided an economic lifeline for Carson and Eagle Valley ranchers during the late nineteenth century. However, competition with California ranchers wintering their cattle in the valleys and an extended drought beginning in 1883 and lasting until 1893 placed severe pressure on all water users on the upper Carson

[67] DCNR-HP&A, Rowley, p5; Dangberg, *Conflict on the Carson*, 3, 21Douglas County.
[68] Douglas County Planning Department, 55; Dangberg, *Carson Valley*, 63.
[69] Dangberg, *Conflict on the Carson*, 3, 21; Bancroft, 255.

River throughout much of this period. Declines in the need for mill water alleviated some of this pressure, but not enough to support all of the ranchers in the watershed.[70]

During this period, ranchers and farmers sought various means to offset the decreased value and demand of their products. Historian John Townley has cited land speculation as one strategy, supported by contemporary histories of the state from the 1870s and 1880s. Some Nevada boosters attempted to attract settlers to small farm plots watered by rivers and streams that were already over-appropriated for mining, timber, and existing ranch operations. For example the well-known *History of Nevada* published in 1888 by Thompson & West portrayed Carson Valley as a rich and successful farmland in that year, with nearly 30,000 acres enclosed by fence for farming. While land marketing carried on, larger ranches and speculators acquired most of the choice agricultural lands via federal land transfer laws such as the Homestead Act (1862), Timber Culture Act (1873), and the Desert Land Act (1877). What remained clear was that mining, railroad, and ranching interests dominated the state legislature and created political gridlock on the issue of water appropriation, preventing Nevada from formulating a state plan for managing water resources until federal involvement in the twentieth century.[71]

Alongside declining local demand, California feed producers and dairies outcompeted local Nevada producers on volume, and thus price. The respite afforded by the Bodie mines proved short-lived, as the subsequent extension of the Carson & Colorado Railroad from Dayton south into the Owens Valley in 1881 shifted the source for agricultural supplies such as fruits, vegetables, and barley from Carson Valley east to Mason Valley and south to Owens Valley in California. In Carson Valley, the primary response was to switch to cattle feed crops until market changes in the early 1890s. Aggravating the effects of market competition was the sustained drought between 1883 and 1893, which led to a crisis in agricultural production. Grain crops failed and alfalfa returns significantly declined, with the few remaining mills along the river shutting down operation until harvest season in that year. The primacy of milling interests meant that many farmers and ranchers who had grown accustomed to indiscriminate damming and diversion of the Carson River for their own purposes found their dams and canals destroyed by milling companies. Most notorious of these milling enforcers was John D. Ludwig, who administered water law along the Carson River throughout the 1880s. With stress on the watershed, calls from Carson Valley for state reclamation projects to store water in irrigation reservoirs dominated the 1888 state legislature, but no serious action would be taken until the federal Reclamation Act of 1902.[72]

Increased stress on water supplies and on available pasture and grazing land compelled some observers to demand closer management of the range's resources. Surveying the area between the Carson and Stanislaus Rivers in the Sierras in 1877 for the Army Corps of Engineers, Lt. M.M. Macomb observed the "scarcity of feed in the mountains." Macomb elaborated that:

> This was due to the fact that the country was completely overrun with vast herds of sheep, which utterly denuded the mountain valleys of grass, and in fact of nearly every green thing within their reach. This unusual influx of sheep was caused by the drought throughout Central and Southern California, the water-supply having failed on account of the light rain and snow fall of the previous season, the average being one of the smallest on record for years….There is no doubt that if the sheep continue to be driven up into these mountains in such vast numbers the grasses will be killed out and great injury inflicted on the country."[73]

[70] Douglas County Planning Department, *The Architectural Heritage of Carson Valley: A Survey of Genoa, Minden, & Gardnerville*, (Minden, Nev., 1981), 9, 55; Elliott, *History of Nevada*, 116.
[71] Townley, *Alfalfa Country*, 2; *History of Nevada*, 373.
[72] Townley, *Alfalfa Country*, 66-68, 155; Dangberg, *Conflict on the Carson*, 29.
[73] Macomb quoted in David Beesley, *Crow's Range: An Environmental History of the Sierra Nevada*, (Reno & Las Vegas: University of Nevada Press, 2004), 105.

Macomb may have exaggerated the specific impact of sheep, but it was clear that overgrazing on the part of all interests had created a critical situation within the region's agricultural network. Drought and price declines had forced area ranchers to adapt, not always successfully. For Henry Dangberg in particular, sheep raising became a more important part of his operations by the 1880s than previously, with an operation that sold 20,000 pounds of wool in 1887 alone. Sheep proved able to graze in harsher environments and on less forage than cattle, compelling the shift. Dangberg moved his sheep into the Pine Nut Mountains early in the year after lambing, and then drove the herds west into Hope Valley in California southwest of Carson Valley in the summer. In the fall, they were brought into Carson Valley to graze off used pasture and cropland until he drove them back to the Pine Nut Mountains. Buckeye Ranch in the middle of Carson Valley was the base of operations for Dangberg's sheep raising. At the height of the operation, the Dangberg family had five to six bands totaling 10,000 to 12,000 sheep.[74]

With the surrounding public grazing lands failing or greatly depleted, feed crop production became a necessary part of sustainable ranching, and western Nevada ranches became a hub for regional alfalfa production. Alfalfa was a popular and nutritious feed that Carson and Eagle Valley ranchers exported to other stock raisers throughout the region. Hay production in the valley, especially with alfalfa mixture, became a mainstay of the economy on the upper Carson by the late-nineteenth century and into the twentieth, transitioning from feeding the oxen and horses of the teamsters to feeding beef and dairy cattle raised in the region that would be shipped by rail to market. The vacuum in the market left by failed, large-scale operations also provided an opening for many smaller-scale ranching outfits to expand into the open and free range.[75]

Despite the tumult of farming and ranching adaptations in the 1880s, many larger ranches sustained operations through the period, albeit suffering for lack of water and losses of financing after 1893. Thompson & West's *History of Nevada* provides a vignette of farming in Carson Valley by 1888, estimating that 200 miles of irrigating ditches ran off the Carson River, supporting yields of twenty bushels of oats and barley per acre, 250 bushels per acre of potatoes, 1.5 to 2 tons per acres of timothy-clover mixture, and three tons per acre of alfalfa harvested twice a year. Considering the drought conditions persisting in the region at the time of Thompson & West's publication, and the publishers' inclination for boosterism, it is likely that most of these crop returns were diminished, perhaps reflecting the very best output of choice land. Nevertheless, the ability of local farmers and ranchers to endure through the drought with reduced yields and reduced local markets is evidenced by their descriptions of individual ranches in the valley:

Name of Farmer/Rancher	Acreage	Thompson & West passage
Dangberg, Fred	4,648	Prominent among these is that of Fred Dangberg, five miles east of Genoa, who has 4,648 acres, all fenced. He has forty miles of irrigating ditches, leading water from the Carson River to this immense farm. In 1879 he had one field of reclaimed sage-brush land of 600 acres all sown to barley. About 1,500 acres are used expressly for grazing, and sustains nearly 1,000 head of stock. The crop of 1879 was 600 tons of barley and oats, and 1,600 tons of hay. Mr. Dangberg is an old resident, having settled in Nevada in 1853. Value of the property, $60,000.
Klauber, A.	1,830	A. Klauber, one of the early merchants of Genoa, and now of San Diego, California, owns a ranch of 1,830 acres, adjoining Mr. Dangberg on the north. Value, $30,000.
Frevort, F.A.A.	830	F.A.A. Frevort has a farm of 830 acres, inclosed, south of Mr. Dangberg's ranch. Value, $18,000.
Farmer, Benjamin	800	Benjamin Farmer cultivates 800 acres, seven miles south of

[74] Achard and Buedel, 70, 83-84.
[75] DCNR-HP&A, Rowley, pp6-7; Walton-Buchanan, 96-99; Young and Clements, 44-45.

		Genoa, in the vicinity of Sheridan. Value, $15,000.
Van Sickle, Henry	1,800	Henry Vansickle's farm comprises 1,800 acres, two and a half miles south of Genoa. Value, $25,000.
Boyd, William H.	1,050	William H. Boyd has a farm of 1,050 acres on Carson River, one mile below Genoa. Value, $18,000.
Van Sickle, P.W.	620	P.W. Vansickle owns what is known as the old Haines Ranch, of 620 acres, three miles below Genoa. Value, $12,000.
El Dorado Wood and Flume Co.	440	The El Dorado Wood and Flume Company have 440 acres, with grist-mill. Value, $15,000.
Fray, Lawrence.	240	Lawrence Fray's farm, on the east side of Genoa, comprises 240 acres, and valued at $10,000.
Haines, J.W.	320	J.W. Haines owns 320 acres in the northern part of Genoa, upon which he has a fine dwelling, the whole valued at $12,000.
Springmeyer, Herman	480	One of the finest ranches in the valley is that of Herman Springmeyer, of 480 acres of superior land, lying five miles east of Genoa. Value, $12,000.
Jones, Joseph	790	Joseph Jones has 790 acres of magnificent land, with fine buildings, lying north of Genoa. Value, $20,000.
Child, John	640	John Child's ranch, adjoining the Jones' property on the north, of 640 acres, with its neat house and large barn, is valued at $20,000.
Crippen, H.C.	240	Ex-Sheriff H.C. Crippen, at the Twelve-mile House, twelve miles from Genoa, owns 240 acres valued at $8,000.
Dangberg, Chris	960	Chris Dangberg's farm, which adjoins Crippen's place on the northwest, embraces 960 acres, and is valued at $8,000.
Pettigrew, J.P.	440	J.P. Pettigrew has a ranch of 440 acres, north of and adjoining Chris Dangberg's land, which has all been reclaimed from sage-brush. Value, $8,000.
Ezell, L.S.	240	Adjoining and west of the Pettigrew ranch, L.S. Ezell has 240 acres, valued at $8,000.
Cary, Bartley	150	On the west fork of the Carson River, eleven miles from Genoa, immediately at the base of the Sierra Nevada Mountains, Bartley Cary has a farm of 150 acres, valued at $10,000.
Cary, William H.H.	170	William H.H. Cary's ranch of 170 acres, lying south of Bartley Cary's, is valued at $8,000.
Parke, David	280	Two miles north of Sheridan, on the main road, David Parke has 280 acres, valued at $10,000.
Parke, Hugh	280	Hugh Parke has 280 acres south of the [David Parke ranch], valued at $8,000.
Dressler, Fred	560	Fred Dressler has 560 acres near Sheridan, valued at $15,000.
Brockliss, A.R.	840	On the west fork of the Carson, one and one-half miles east of Sheridan, A.R. Brockliss has 840 acres, valued at $16,000.
Taylor, A.M.	517	A.M. Taylor owns 517 acres one and one half miles north of Sheridan, valued at $7,000.
Baldwin, John	440	Near the California line, in the upper end of the valley, four miles southeast of Sheridan, John Baldwin has a farm of 440 acres, valued at $8,000.
McGuin, Anthony	580	Anthony McGuin owns 580 acres two and one-half miles southeast of Sheridan, valued at $12,000.

Adams, J.Q.	820	J.Q. Adams has a farm three miles north of Genoa, of 820 acres, which is valued at $12,000.
Berry, Hanson	360	Hanson Berry's farm of 360 acres, situated three miles east of Sheridan, is valued at $10,000.

As usual, Carson Valley eclipsed Eagle Valley in sheer volume of agricultural production. By this period, the growth of Carson City as the state capital, with subsequent commercial and residential development, meant that a small city had emerged in the midst of what was already a much smaller valley floor than its counterpart to the south. Of those still ranching, Samuel Nevers produced hay and potatoes, and Aaron Treadway, known locally as "Farmer Treadway," maintained a public park on his ranch near present-day Williams & Mountain Streets. In 1880, the Surveyor General's report mentioned that "about 5,000 acres of [Eagle Valley] are inclosed [sic] with good fences, a large part of which is in a fine state of cultivation."[76]

In Carson and Eagle Valleys, grazing practices by large cattle companies that had been in place since the 1860s transitioned toward pasture-based ranch complexes around the turn of the century. Thompson & West's history estimated in 1888 that around 10,000 head of livestock were scattered amongst these and the other various ranches of Carson Valley, requiring a great deal of forage and compelling greater reliance on cultivated feed. Summer ranges were still important, but after 1891, federal administrators controlled access to grazing areas in the eastern Sierra Nevada under the Forest Reserve Act as part of a collection of national forests, now administered by both the Humboldt-Toiyabe National Forest and the Lake Tahoe Basin Management Unit. At the same time, agricultural experiment stations established throughout the western United States under the Hatch Act of 1887 experimented with new feed crops from around the world in the hopes of better supporting struggling farmers and ranchers. The importation of ample seed supplies aided in the proliferation of non-native invasive plant species such as cheatgrass (*Bromus tectorum*), which traveled along with imported seed and naturalized. Cheatgrass in particular, native to the sage steppes of central Asia, was already well-adapted to harsh climates like that found in the Great Basin. By early 1904, cheatgrass was present along roads and railroad beds in Reno, and within the next twenty-five years, it was abundant throughout the sage-brush steppe ecosystem. Russian thistle (*Kali tragus*), more commonly known as "tumbleweed," was another such invader from Eurasia that was generally absent from western landscapes until the late-nineteenth century. These invasive species found vectors in western Nevada as the region became a source for cereal grains such as those cultivated by the Carson Valley's leading ranchers, including the Langbergs and the Dresslers. The development of large, steam-powered threshing machines allowed for the mechanization and expansion of grain farms, and allowed for these larger operations, or independent custom operators, to travel among smaller farms to process their grain crops. As this equipment was rarely cleaned between jobs, it accelerated the spread of invasive plants such as cheatgrass and Russian thistle. Furthermore, traditional burning to clear pasture or farmland that had previously favored native perennial grasses now provided avenues for the colonization of newly burned areas by cheatgrass. Some ranchers attempted to limit the growth of cheatgrass through repeated burning of areas where the brome dominated, with minimal success in the long-term.[77]

Litigation over water continued in the late-1880s as well, with water levels critically low by 1888. In that year, Carson Valley ranchers filed suit against upstream users in California who dammed increasing amounts of water from a river that had dropped so low that logging companies could no longer use it for transportation. Amid the shrinking supply of water, the power dynamic over water between mining and agricultural interests swung in favor of the livestock industry. In 1893, the Union Mill and Mining Company again sued over 100 Carson Valley ranchers for access to the Carson River's critically low water flow. The ranchers organized to fight the suit, eventually prevailing in an 1897 decision that affirmed prior appropriation rights to distribute water, a formula that favored the earlier ranching interests along the upper Carson River established in the 1850s. Carson Valley remained a focus of the state legislature's attempts to address the water supply issue in

[76] *History of Nevada*, 527-530.
[77] Young and Clements, 45-46.; *History of Nevada*, 373.

the 1880s and 1890s. Several desperate attempts to address the decreasing water supply emerged from the state legislature. In 1887, one official proposed to siphon water from Lake Tahoe to water 150,000 acres in Carson Valley, a project blocked by representatives of the Truckee River basin. The same legislative session authorized the expenditure of $100,000 to survey and construct the state's first reclamation reservoir on the upper Carson River. Legislators hoped the reservoir could be located on the Carson above the water-powered mills so as to avoid milling shutdowns during dry late-summer months. The state's Surveyor-General said of the proposed site in his 1889 report:

> At various points on the East and West Forks of the Carson River, and near their confluence, in Douglas County, dams could be constructed with great advantage to both the farmers and millmen, who now annually quarrel over a fair division of the scanty stream, the flow of which entirely ceases before summer is over, thereby causing the suspension of milling, and a consequent depression in all the industries of Western Nevada.

Douglas and Ormsby County producers, recognizing that the Carson River was over-appropriated, even looked for federal funding to plan an upstream reservoir within California. However, corruption charges and bungled implementation meant that the state reservoir was never constructed and regional reservoir construction remained largely private. The Dangbergs built a series of reservoirs along the eastern side of Carson Valley, and the Dresslers constructed their own reservoir above their operation, known as Mud Lake. In the 1889 session, state legislator Francis Newlands passed for a mill power reservoir in Carson Valley, but saw that effort hampered by H.F. Dangberg's subsequent claim of 5,000 acres of irrigable state land just below one of the best sites for the reservoir. Dangberg's action also signaled his power and influence in the valley's agricultural scene, a position sometimes resented and challenged by other farmers in the area, especially the Springmeyer family. In the midst of this dispute, Herman Springmeyer often acted as an ally and land agent on behalf of Newlands. Further cause for delay came from the lack of available sites along the Carson River because so much had been transferred out of public ownership. Increasing public opposition from other areas of Nevada, and warnings from federal engineer Col. Lyman Bridges that the cost of such a reservoir would far exceed the appropriated $100,000, both aggravated delays and eventually forced abandonment of the project. Only the beginning of above average precipitation across most of the Great Basin starting in 1890 temporarily softened competition over the region's most precious natural resource.[78]

The State's emphasis on irrigated, intensive agriculture like that in Carson and Eagle Valleys was apparent in the laws passed by the legislature in the 1880s and the real estate practices of the private sector. Among the more simple, if still revealing, laws was Senate Bill 1994, introduced by Henry Dangberg in 1885 to regulate swine in agricultural areas, specifically holding the owners of swine liable for damages and requiring pigs to be enclosed. Pigs were often an auxiliary animal, providing relatively easy market returns while being fed off of scraps including wasted produce and skim milk. The 1885 Senate bill, along with the documented experiences of northwest Nevada ranches, signaled the ubiquity of pigs on these operations, but the bill does not appear to have passed – as late as the 1920s, Frieda Cordes Godecke recalled that as late as the 1920s, pigs were still allowed to roam freely, despite the damage they often caused to household gardens. Most successful legislation during this period still tended to favor open range ranching, with Nevada's open range law passed in 1893 and placing the obligation of fence construction to protect against damage from free-ranging livestock on the farmers who might receive the damage.[79]

In 1889, Francis Newlands contracted with Robert Fulton to negotiate land and water rights deals in Carson Valley related to the former estate of William Sharon. Fulton's task was to facilitate a conclusion to the litigation between mining mill owners and Carson Valley ranchers and convince the Dangbergs and others to drop their options on lands in upper Carson Valley. Newlands hoped that with the settlement of the region's water issues, the Sharon estate lands could be sold as family farms at a profit and increased agricultural

[78] Townley, *Alfalfa Country*, 12-14, 112, 120-121, 134-135, 159-160; Dangberg, *Conflict on the Carson*, 256-257.
[79] Townley, *Alfalfa Country*, 138; McCuin and Foster; Frieda Cordes Godecke, *After Centerville*, no date, 10-20.

production in the area could be realized through enhanced reclamation. Newlands' Carson River prospects focused on three areas. The upper site of 4,000 acres was situated in Long Valley in California adjacent to the Dangberg's 1889 land entry. Newlands hoped this might be the site of a private reclamation reservoir to serve Carson Valley farmers. A second site was near Cradlebaugh Bridge, and intended to impound water for area mining mills. The third was below Dayton and was hoped to serve famers in the Carson Sink in Churchill County. Newlands' hope with this ambitious project was to create a privately owned irrigation system that could supply area farmers throughout the watershed and help pull Nevada from its economic depression. Although Newlands' project on the upper Carson never came to fruition, the need for improved water management was certainly present. Douglas County's section of the Carson River hosted six saw mills and two hundred miles of irrigation ditches, producing forty thousand pounds of butter annually, and with farms valued at over $500,000 by 1885. The volume of use would force improvements in later years.[80]

The global Silver Panic of 1893, some area farmers looked to other options to sustain their operations, namely grain milling and dairying. With silver being a premier commodity of Nevada's economic engine, the reduction in residential, commercial, and industrial development was dramatic, and affected farmers and ranchers as the banks that they relied upon for lending capacity shuttered. This, combined with prolonged drought and market changes for agricultural products, precipitated a regional campaign in western Nevada for self-sufficiency, as many larger farmers in the area attempted to form mill cooperatives and expand dairy operations that had previously been secondary. As early as 1891, several of Carson Valley's most prominent farmers and ranchers, including Fred Dangberg, Fred Dressler, H.H. Springmeyer, and D.B. Park created the Carson Valley Mill Company. The company sought partners from as far away as Mason Valley and used the Cohn mill in Carson Valley as its base of operations, although the venture failed early on. Nevertheless, dairying remained an increasingly important part of the region's economy. Even relatively new ranchers such as the Settelmeyers began growing their operations for dairy production and feed supplies, with the Settelmeyers purchasing an additional 640 acres from the Occidental Land Company, operated by the Newlands family, and raising both beef and dairy cattle. The Dangbergs, Dresslers, and Springmeyers would later join together again to create the Minden Flour Milling Company based in the future Dangberg constructed town of Minden. Also in 1891, 43 other Carson Valley ranchers formed the Carson Valley Creamery based at Dangberg's Home Ranch in Carson Valley. By August, the creamery was constructed near what is now the northwest corner of Mottsville Lane and State Highway 88, mostly managed by Julius Kaupisch. The plant began production in September and rapidly grew to process 17,000 pounds of milk daily into 600 pounds of butter and cheese as output, with skim milk supplying feed for hog raising. On November 10 of the year, the corporation deeded the property to the Nevada Creamery and Commercial Company headed by Evan Williams of Empire in Ormsby County. In October of the following year, the company deeded the land to the California-Nevada Creamery Company, a conglomerate overseen by various Comstock interests including the former William Sharon estate, managed by Francis Newlands. The company eventually operated four creameries–one in Smith's Valley, one in Fredericksburg, one on Francis Newlands' ranch near Fort Churchill, and one in Carson Valley–but it deeded the Carson Valley operation to William Dangberg in 1896. Frustration over management of the Carson Valley Creamery by 1893 led 42 area ranchers led by John Frantzen, C.M. Henningsen, H.C. Dangberg, Fritz Heise, and Christ Rabe to create the Douglas County Creamery, located along Waterloo Lane a half-mile west of Highway 88. This trend reduced the profitability for the California-Nevada Creamery Company compelling them to sell back their creameries to local ranchers who operated them alone or formed cooperatives.[81]

1893 to 1945 –Progressive and New Deal Agriculture on the Upper Carson River

The rise of Progressivism throughout the United States meant that farming and ranching along the upper Carson River became more tightly managed, and more tightly bound to trends in federal land and natural resource management. This was expressed most forcefully along the upper Carson River in the form of reclamation projects to support the farming and ranching along the river's route through Nevada. Activity began in the private sector, but compelled Francis G. Newlands, now a U.S. Senator for Nevada, to press for a national

[80] Townley, *Alfalfa Country*, 138, 142-143.
[81] Townley, *Alfalfa Country*, 68, 128, 171; Achard and Buedel, 85, Dangberg, *Carson Valley*, 110-113; Glass, *Fred Settelmeyer*, 3.

reclamation service, a move that also led to the overhaul of the state's water laws. Both the new U.S. Reclamation Service (now the Bureau of Reclamation) and changes in Nevada state water law had a significant effect on Carson and Eagle Valley farmers and ranchers. In 1903, the state legislature created the Office of State Engineer, responsible for administering water rights and issuing water use permits. Considering the engineer's ability to influence or dictate water priority, the office exerted considerable control over Nevada's agricultural development in the twentieth century. With the Forest Reserve Act of 1891 bringing public grazing ranges above Carson Valley under tighter control, the reliance on irrigated pasture and hay production became all the more critical. The centralization and increasingly tight management of public lands coincided with the increasingly absentee ownership of many of Nevada's industries, including agriculture. Over this period, as homesteads failed and agriculture experienced continued drops in prices and shrinking liquid assets, out-of-state property owners controlled a greater and greater share of the state's farmland. By the early twentieth century, only 100 corporations or individuals, most of whom were incorporated or lived outside of Nevada, controlled 75% of the private land within the state, propelling a long-term shift from small family farms to large-scale industrial operations. However, despite the increasing use of mechanized equipment into the early twentieth century, draft horses continued to be the mainstay for power on even the largest of ranches. The reality of absentee ownership further propelled the rise of local agriculture in this period, both out of economic necessity and out of cultural resentment against out-of-state interests. [82]

Among the efforts to reseat the focus of agriculture in Nevada on local farming was a renewed emphasis on reclamation, propelled in part by continued growth of the upper Carson's dairy operations. The increasing use of the Carson and Truckee watersheds for dairying demanded adequate water for livestock, pasture, and hay crops. Nevada dairying in Carson, Eagle, and Washoe Valleys and the Truckee Meadows, had been growing swiftly as dairy farmers supplied markets outside of Nevada by the early 1890s. In 1892, the state's Surveyor General noted that the butter production of the state had increased to 231,000 pounds, as opposed to an average hovering around 20,000 pounds in previous decades. A year after the Douglas County Creamery's incorporation in 1893, representatives of the cooperative ventured to San Francisco to market their goods, earning a contract to supply the city's well-known Palace Hotel, with Carson Valley butter also winning the gold medal in San Francisco's Mid-Winter Fair that year. The notoriety generated more demand, compelling dairy farmers to build new dairy barns that were larger, could shelter more livestock, and could store more hay. The processing of dairy products at the Douglas County Creamery led to the establishment of the community of Waterloo just to its west, now near the intersection of Mottsville Lane and State Highway 88. Several ranchers who were either German immigrants or of German descent established ranches around Waterloo, which became the hub of dairying in Carson Valley for a time. As mentioned above, in 1893 a group of 42 area ranchers led by John Frantzen, C.M. Henningsen, H.C. Dangberg, Fritz Heise, and Christ Rabe established the Douglas County Creamery in 1893, located along Waterloo Lane among the ranches of the Henningsens and Stodiecks. In 1895, Adolph Rolfs, a German immigrant, purchased eight acres at this crossroads which included a blacksmith shop. Rolfs constructed a house here, but quickly sold it to Henry Neddenriep of Diamond Valley in 1907. The former California-Nevada Creamery building near this location became a dwelling for the Goldstein family, and by 1907, H.W.F. Luhrs purchased the Behrmann property in the hamlet and expanded the bar and boarding house with a dance pavilion, creating a resort and community center. All manner of valley residents engaged in the dairy business, including Mrs. Hugh Hansen, who supplied butter to Walley's Hot Springs, and Mrs. A.M. Taylor, formerly Mrs. Israel Mott, who supplied the Glenbrook Inn at Lake Tahoe. The wealth generated in the valley allowed farm and ranch owners to construct so-called "butter built" homes, new and larger homes on farm and ranch complexes financed with dairy wealth. Among these constructed in the 1890s and 1900s were those of the Dresslers, Lampes, and Henningsens. However, the success of the dairy industry, especially for the Dangberg family, quickly shifted the focus of dairy processing from the Douglas County Creamery to the Dangberg's newly constructed town of Minden, which included the Minden Butter Manufacturing Company, constructed in 1908 by a collection of farmers including R.W. and Dick Bassman, Fritz Schacht, H. Luhrs, Dick Fricke, William Dangberg, and C.E. Merrick. As a result of the lost business, the Douglas County Creamery shut down in 1914, having been run over its 21-year life primarily by the Heise, Henningsen, and Stodieck

[82] DCNR-HP&A, Rowley, p9, White, 268.

families. The Minden Butter Manufacturing Company continued to operate until 1959, selling butter under the Windmill Brand, mostly supplied to the California coast.[83]

As economic competition forced refinement and environmental fitness among the region's beef and dairy herds, breeding became increasingly important. Prior to 1918, Durham short-horns had served as multi-purpose cattle, used for beef, work oxen, and milking. By the early twentieth century, farmers and ranchers, sometimes in partnership with the University of Nevada, Reno's Agricultural Experiment Station, began testing varieties of cattle for their hardiness and milk productivity. In 1918, when Mrs. J.B. Dangberg was on a visit to Missouri, she noted the registered Hereford stock of W.N. Collier in Fulton. The following January, the Dangberg Land & Livestock Company sent cattle foreman Fritz C. Neddenriep to Missouri, and eventually purchased a foundation herd for the company's Hereford breeding stock. William F. Dressler hired Neddenriep to do the same, and these herds became the foundation for a conversion of all of Carson Valley's beef cattle to Hereford varieties.[84]

Alongside the dairy and beef industries in the region, the sheep industry in this period also saw marked growth. By the late 1890s, the Douglas County Assessor reported that 13,000 head of sheep grazed in the valley; by 1925, the same office reported 25,000 head, equaling an annual wool clip of 250,000 pounds. Early in this boom, Basque sheepherders became an important labor force in the care of sheep on German ranches and farms in Carson Valley. Several Basque boarding houses sprung up in nearby towns, including the Pyrenees Hotel in Gardnerville, operated by Joe Inchieo. Although the Dangberg family appears to have been the largest of the area sheep operators, many others began developing sizeable sheep operations in both Carson and Eagle Valleys by the turn of the century, including the Dresslers, Jacobsens, Parks, Bordas, and Uhaldes. The Dresslers relied on Basque herders to help maintain their operations from the 1900s to the 1930s. In Carson Valley in particular, Basque herders became a trusted labor force in the region's sheep industry, especially after its growth in the beginning of the twentieth century.[85]

With the livestock industry reviving by the early 1900s, support for reclamation projects in northwest Nevada saw renewed interest to support irrigation of hayfields. Advocates for reclamation reservoirs hoped that a series of additional dams along the Carson would serve a dual purpose, not only storing irrigation water, but providing flood control for downstream property. As late as 1893, the *Genoa Courier* called for a new dam to force the West Fork back to its original channel to avoid crop losses and ensure farmers on the west side of the valley had access to sufficient water. From 1895 through the 1920s, various private ranchers and farmers, and the corporations of which they were a part, constructed dozens of reservoirs in the mountains south and west of Carson Valley, most of them in Alpine County, California along the upper extent of the Carson River branches and their tributaries. The majority of these reservoir and canal projects were not aimed at expanding the farmed acreage in Carson and Eagle Valleys as these were already generally maximized. Rather, they were focused on providing crop security to farmers who had experienced significant hardship from the recurring drought cycles of the region. The success of these largely private irrigation projects, primarily for Carson Valley, meant that when federal reclamation officials looked to select an area in Nevada for one of the nation's first reclamation projects, they avoided Carson Valley only because it had already been settled, transferred out of the public domain, and adequately irrigated, leading them to select Churchill County on the lower Carson as the project's target.[86]

This landscape of privatized reclamation saw increased investment in the 1890s. Leaders in northwest Nevada incorporated the Alpine Land and Reservoir Company with the intent of purchasing land in Alpine County, California and constructing reservoirs to irrigate nearly 16,000 acres of farmland in Carson Valley. Among their first moves was to purchase fifteen existing reservoir sites already constructed by individual owners. Many of these reservoirs appear to have been naturally-occurring mountain lakes where ranchers had added dams to increase their capacity, such as Red, Scott, and Crater Lakes. The relatively small company quickly amassed

[83] Dangberg, *Carson Valley*, 112-115.
[84] Dangberg, *Carson Valley*, 122-123.
[85] Dressler, 47-48; Dangberg, *Carson Valley*, 127-131; Dressler, 46-47.
[86] Dangberg, *Conflict on the Carson*, 138-139.

priority water rights for 4000 acre-feet of water annually. In the summer of 1896, crews from the company began placing floodgates on several unclaimed lakes to increase their storage capacity and provide for managed outflow. Concurrently, the company purchased 8,000 acres of land in Carson Valley from the Occidental Land and Improvement Company, the Sharon family subsidiary, to be subdivided and sold as small family farms. The project became one of the first inter-state reclamation projects, with the land from Occidental on a two-year option, with the company hoping to offer land for sale to settlers in 1897. However, with an especially dry summer in 1898, Douglas County farmers and ranchers eyed the improvements for purchase, and by 1900, several of the more influential ranchers of the valley collectively purchased the company's entire system of eight reservoirs and subsequent canals. After the purchase, among the improvements ranchers made to the system included a dam at Lower Kinney Lake on upper Silver Creek and the Kinney Meadows Dam that created the Kinney Reservoir on upper Kinney Creek, both constructed in 1908.[87]

In addition to purchasing the Alpine Land and Reservoir Company, several well-known ranching families along the Carson's West Fork began acquiring and improving reclamation resources for their own operations. Among the best known of these were the Dresslers represented by William F. Dressler, the Settelmeyers represented by F.H. Settelmeyer, and William Neddenriep, all of whom developed their own irrigation systems to protect against the severe droughts that had hampered agriculture in decades prior. For the Dresslers, the small ranch that August F. Dressler had begun in the 1860s had grown into a large and complex operation. August Dressler's son, William Frederick Dressler, expanded the ranch's holdings to over 80,000 acres in Nevada's Carson and Smith Valleys, as well as around Bridgeport, California to the southwest. William served as the director of the Carson Valley Farmers Bank in Minden (NRIS# 00000338) as well as a state senator in the Nevada legislature. Much like the Dangbergs, Dressler invested in irrigation systems, building a reservoir that created Mud Lake to provide water storage for his cattle, as well as the Plymouth Canal in Smith Valley. Like many major ranchers, he established a creamery and flour mill on the Dressler family holdings to process the milk and grains produced on his vast acreage.[88]

The federal Truckee-Carson Irrigation Project drained by Fallon's Newlands proved controversial as a result of the competing appropriations between area ranchers and the United States, especially regarding projects for which ranchers filed water claims after 1903. With the memory of conflicts with mill owners still fresh for upper Carson farmers and ranchers, the prospect of losing even more river water to a new collection of downstream farmers yet to arrive galvanized local opposition to the federal reclamation project. The Truckee-Carson Irrigation Project, later renamed the Newlands Irrigation Project and overseen by the U.S. Reclamation Service, combined water rights from both the Truckee and Carson Rivers to provide irrigation water to new farm plats in communities such as Fallon, Stillwater, Fernley, and Wadsworth. In 1902, the Department of the Interior filed with the newly formed Nevada State Engineer's office for 5000 cubic feet per second of water from the Carson River to irrigate 232,000 acres of land in Churchill County where the Carson River emptied into the Carson Sink. After the passage that year of the Reclamation Act, which assigned the new Reclamation Service to the Department of the Interior, the Department filed for an additional 1500 feet per second of water from the Truckee River to be diverted to a proposed reservoir in western Churchill County. This move compelled the federal government to file suit in federal court to adjudicate water rights along the Carson River in *United States v. Alpine Land & Reservoir Company*, a case not finally settled until 1980. As part of the documentation for the government's case, federal engineer Richard Allen meticulously documented the irrigation networks existing on the upper Carson, providing an unusually high level of detail for Carson and Eagle Valleys agricultural landscape in the 1910s. Allen and his team provided a complete recording of land ownership and irrigation systems in that decade. In 1913, Allen's team recorded 117 irrigation ditches and canals in Carson Valley alone, providing water to well over a hundred sizeable ranches in excess of 200 acres each.[89]

[87] Townley, *Alfalfa Country*, 178-179, 205; Dangberg, 20-21, 105-106, 348-351.
[88] Walton-Buchanan, 40; Dangberg, *Conflict on the Carson*, 138.
[89] Dangberg, *Conflict on the Carson*, 127; U.S. Department of the Interior, Bureau of Reclamation, *The Bureau of Reclamation: Origins and Growth to 1945*, Vol. 1, by William D. Rowley, (Denver: 2006), 91; U.S. Department of the Interior, U.S. Reclamation

The emphasis on water storage and general increase in agricultural production in the 1910s and 1920s compelled upper Carson River ranchers to expand their tilled acreage further, not only for increased profits but to bolster the tax revenue of Douglas and Ormsby Counties. Between 1912 and 1914, Carson Valley ranchers who were concerned about competition with the Carson-Truckee Irrigation Project entertained the idea of extending the project's administration into the valley in an effort to ensure their access to sufficient irrigation. On January 17, 1914, a group of 57 ranchers from the area, including major figures such as H.F. Dangberg, C.M. Henningsen, and William Settelmeyer, met in Minden and created the District Number One Carson Valley Unit of the project in partnership with the U.S. Reclamation Service. Part of their motivation behind forming the district was the hope that federal funds could be used to expand the irrigated acreage in Carson Valley. Although the Reclamation Service seriously considered the proposition and researched reservoir locations in Long Valley south of Gardnerville, the project never materialized due to disagreements over the value of the private land to be sold to the Service for the project. By 1922, area ranchers revived the idea of a private reservoir project in Long Valley, encouraged by acts in the Nevada legislature in 1913 and 1919 that established a means by which landholders could join into private water districts even if they had not invested in the venture at the beginning. Despite the absence of federal dollars for reclamation, the H.F. Dangberg Land & Livestock Company, the consolidated company for the Dangberg family, developed land ventures north of Minden intended to spur agricultural development in the region, and perhaps make up for diminishing financial returns in the years following the First World War. The Dangberg Company began selling some of its land holdings in the 1910s via a project they titled the Minden Irrigated Farms. The company platted fifty-acre farms and marketed them to would-be farmers with accompanying water rights via brochures and sales companies. The first unit of the Minden Irrigated Farms project was platted northeast of the burgeoning town of Minden. The Dangbergs were not alone in beginning to subdivide and market their territory; L.H. Taylor, the consulting engineer on the newly formed District Number One began marketing his own, selling small tracts at $100-$125 an acre. The concept appears not to have taken hold, as most of the territory north of Minden remained in Dangberg's ownership, with very few new farmsteads sited east of the road to Carson City.

With the changes in Nevada's water law providing more solid footing for private reclamation efforts, the number of private dams, reservoirs, and canals expanded beginning in the late-1910s through the following decade. William Dressler, along with Settelmeyer and Neddenriep, acquired the Red and Scott Lakes in Alpine County, California from the Alpine Land and Reservoir Company between 1918 and 1919, and improved them alongside the improvement of a dam at Crater Lake, giving them access to a collective 2159 acre-feet of water annually. In another effort to establish a collective irrigation district under the 1913 and 1919 laws, a committee including William Dressler, Louis Stodieck, A. Settelmeyer, M. Mack, L.H. Taylor, H.F. Dangberg, J.B. Dangberg, F. Fricke, and L.P. Jacobsen led the effort surveying sites in Long Valley along the East Branch of the Carson River and in Diamond Valley along Indian and Scott Creeks. The committee's report to the Douglas County Board of Supervisors concluded that a Diamond Valley reservoir was ideal, estimating that the project could store 29,000 acre-feet of water for around $474,000 in construction costs, meaning water for 15,000 acres with much left over to enhance irrigation on existing farmland. Another valley rancher, George Springmeyer, led an opposition to the proposed district, expressing concerns about the long-term financial obligations of such a project on the irrigation district. As the Indian Creek Reservoir and Harvey Place reservoirs were underway, other projects emerged including one led by Fred Gansberg, Fred Bruns, the Wennhold Brothers, and the William H. Rowe Trust Fund who collectively developed and held rights to 219 acre-feet of water in Upper or East Lost Lake and Lower or West Lost Lake beginning in 1924. The Dangbergs acquired and constructed a new reservoir at Heenan Lake along Monitor Creek in Alpine County in 1924, hoping to enhance the irrigation available to their subdivided farm projects in Carson Valley. The lake held up to 4160 acre-feet, with the

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Service, "Truckee Carson Project – Carson Valley Ditches," by D.S. Strives[sic], map #34, Subseries 8, Richard A. Allen Papers, NC97, University Archives & Special Collections, University of Nevada, Reno (hereafter, UNR).

Dangberg Land & Livestock Company owning 2948 acre-feet of water right that the company began using by 1928.[90]

Pressure on farmers and ranchers over water rights, concern about the longevity of their operations, and the rise of new mining markets throughout the state led to the consolidation of many family operations under umbrella companies, and ultimately led to the founding of the Town of Minden as the new center of Carson Valley. Many successful ranchers in the area began consolidating their holdings into corporations to cooperatively handle multiple aspects of their operations, from water management to marketing and distribution. Several began forming cooperative efforts to market their produce both in Nevada and outside the state. The aging Fred Dangberg incorporated his vast land and water rights into the H.F. Dangberg Land and Livestock Company in 1902, in order to pass the over 30,000 acre operation more easily to his sons. Taking charge of the operation was Dangberg's oldest son, Fred Dangberg, Jr. With the company also needing an expanded irrigation infrastructure, between 1902 and 1906 the Dangbergs contributed to the extension and enlargement of the Allerman Canal and built the so-called Eastside Reservoirs, or Allerman Nos. 1, 2, and 4. The Eastside reservoirs, all built in 1906 north of Minden and Gardnerville, could hold up to 1552 acre-feet of water from the East Branch of the Carson River and Buckeye Creek. Fred Dangberg, Jr., envisioning a much larger operation, granted a right-of-way for an extension of the Virginia & Truckee (V&T) Railroad south into the valley and donated 158 acres for the construction of the new terminal for the railroad. In September of 1905, the V&T began laying track south from Carson City, with the line completed by 1906. Fred Dangberg, Jr. named the new town that sprang up at the terminus Minden, after the county seat of his father's home province of Halle, Germany. With the town founded and railroad line completed, several agricultural business partners including Fred Dangberg, Jr., William F. Dressler, E.M. Henningsen, Richard Bassman, and C.H. Springmeyer, established the Minden Flour Milling Company in 1906, constructing the Flour Mill (NRIS# 78001721) the following year and a creamery building in 1908, directly at the end of the train line. East of the mill, the Dangberg Land & Livestock Company built warehouse space that became the Myers Mercantile Store, which opened in 1907. The Mercantile would later be named the Farmers Cooperative Mercantile after 1915 and stood on that location until its demolition in 2015. The mill was capable of producing 100 barrels of flour per day, and the creamery turned out 30,000 pounds of butter per month. The high demand for processing led to the addition of four silos onto the flour mill in 1908. The creamery was expanded into a larger, brick plant named the Minden Butter Manufacturing Company in 1916 (NRIS# 86002260). It was joined by the large, brick Minden Wool Warehouse (NRIS# 86002261) constructed the same year. The development and relatively quick growth of Minden as the new center of commerce in Carson Valley compelled Douglas County to move its seat of government from Genoa to Minden in 1916.[91]

By the 1910s, the H.F. Dangberg Land & Livestock Company owned nearly 38,000 acres in Carson Valley, concentrated at four main ranches: the Home Ranch, Klauber Ranch, Buckeye Ranch, and Sheep Camp. Each ranch had a foreman with a residence on the property, as well as a full-time cook and kitchen. All of the ranch employees lived on each ranch in bunkhouse accommodations. Every ranch also had its own dining room blacksmith shop, barns, and equipment outbuildings. The Home Ranch was the base of the Dangbergs' dairy operation, and included barns for the livestock, a slaughterhouse, and a hide house. The former Klauber Ranch headquartered the company's beef cattle operation, and stabled most of the company's riding horses. The Buckeye Ranch was the largest of the four and headquartered the crop and sheep production. In 1907 alone, the Buckeye Ranch produced 1,085,000 pounds of barley and 213,000 pounds of wheat. The ranch included a large vegetable garden to sustain the four complexes and their staffs. The main equipment storage and servicing was also based at Buckeye. The Sheep Camp Ranch, despite the name, actually focused on crop agriculture, including small grains and alfalfa, but included loading pens for livestock next to the Virginia & Truckee Railroad right-of-way. To market products outside of Carson Valley, Fred Dangberg, Jr., and other farmers organized the Carson Valley Hay and Produce Company in 1909. They constructed a large storage barn

[90] Walton-Buchanan, 40; Townley, *Alfalfa Country*, 178-179, 205; Dangberg, 20-21, 105-106, 138-139, 223-224, 229-231; Achard and Buedel, 115-123.
[91] Walton-Buchanan, 38-39; Achard and Buedel, 101-109; Douglas County Planning Department, 9, 33.

northwest of the creamery and flour mill and operated until 1923 when a windstorm destroyed it. The expanded activity required substantial financing, and the Dangbergs again saw to it that the Carson Valley Farmers Bank (NRIS# 00000338) was constructed on their townsite at Esmeralda and 4th Street in 1909. Business expanded so quickly, however, that a new, larger bank was constructed across the street in 1918 (NRIS# 86002264), designed by Frederic DeLongchamps. The Hay and Produce Company provided supplies throughout the state during Nevada's copper and gold boom in the early 1900s, selling goods by rail in towns as distant as Tonopah, Goldfield, Luning, and Mina via the Carson and Colorado Railroad and its connecting railways.[92]

To the north in Eagle Valley, ranchers maintained their operations within the relatively small capital city. In 1912, much of Carson City's western half, along Ash Canyon and Kings Canyon Creeks, was still agricultural, with open fields and ranch steads operated by C.W. Robinson and H.M. Anderson straddling Kings Canyon Creek as it outlets into Eagle Valley (see Figure 1 at end of document). Both ranch complexes are still present, although most of their accompanying land has been subdivided and developed into housing since the 1950s. Steve Belli, a Swiss-Italian immigrant, acquired the nineteenth century Meyers Ranch which now straddles Fifth Street east of downtown near the State Prison. In 1936, Sam and Eva Lompa purchased the Belli ranch and established a dairy operation there. They initially sold their dairy products to the Minden Butter Manufacturing Co. (NRIS# 86002263) but after that operation closed, switched to raising beef cattle. They steadily sold off or donated much of their holdings for projects such as Carson High School (1970), the U.S. Interstate 580 corridor (2014), and most recently, a planned housing development to be constructed in 2017.[93]

Despite the proliferation of irrigation reservoirs and canals throughout the upper Carson River network during the 1920s, agriculturalists found their economic returns increasingly threatened by nation-wide trends in crop markets. An agricultural depression following the First World War drastically reduced crop prices throughout the country, with its effects felt sharply by northwest Nevada farmers and ranchers. The H.F. Dangberg Land & Livestock Company issued a $750,000 sale of bonds in 1921 to provide capital for their operations, signaling the strain of the agricultural recession. The company took on an increasing amount of debt during the 1910s and 1920s, an issue exacerbated by the stock market crash of 1929 and subsequent Great Depression. The result was a crippling amount of debt for the Dangbergs that carried forward into the 1940s and eventually forced the once great ranching entity out of the agricultural industry entirely. Aggravating the effects of prolonged economic depression for all regional ranchers was a sustained drought that began in Nevada in 1928 and became especially severe by the 1930s. As early as 1929, the Dangberg Company began running its large artesian well pumps day and night to ensure adequate irrigation of the company fields. In that year, the Alpine Land and Reservoir Company released its stored water several weeks early to avoid the failure of the valley's second crop of alfalfa. With the 1929 stock market crash sending lending institutions under, farmers and ranchers that relied on credit for their agricultural operations and to weather bad years found their finances increasingly strained. Many Carson and Eagle Valley ranchers failed, or at least operated at a loss for much of the following decade. Mid-level operations such as the Stodiecks and Lampes ceased hiring seasonal laborers, instead calling on family members who had left the farming business, many of whom were out of work anyway, to fill the gap in labor. Many of the out-of-work laborers would later find employment in the federal labor camps established in Douglas and Ormsby Counties under President Franklin D. Roosevelt's various New Deal programs.[94]

For graziers in the region, the New Deal era became a more active extension of earlier Progressive Era programs and concepts, only with federal agencies filling the role that private investors and collaborative projects had taken on previously. Under Franklin Roosevelt's administration after 1933, the Grazing Service and Soil Conservation Service (SCS) both completed a significant amount of work in northwest Nevada, primarily with Civilian Conservation Corps labor based at two camps in Carson Valley, one at the Dressler Ranch called Camp Minden (DG/G-87 and SCS-6) near Gardnerville for Forest Service, Grazing Service, and

[92] Achard and Buedel, 105; 166-173; Glass, *Fred Settelmeyer*, 8.
[93] Moreno, 83; J.C. Wehlbruck, "Eagle Valley, Carson City and Carson Valley, Nevada," photograph, 1912, UNRS-P1992-01-5981, UNR.
[94] Achard and Buedel, 193-200; Dangberg, 233-234; Glass, *Fred Settelmeyer*, 18.

Soil and Conservation Service projects, and one near Indian Creek Reservoir (BR-52) for the Bureau of Reclamation. These workers maintained or expanded irrigation programs, cleared truck roads, built fencing, constructed pipelines for the development of springs, and fought range and forest fires. Much of the fence work completed by CCC laborers involved establishing grazing district and allotment fencing on public lands as a result of the Taylor Grazing Act of 1934. Perhaps one of the most memorable and large-scale of the Minden camp's projects was the construction of a 1.5-mile rock drift fence along the crest of the northern Pine Nut Mountains near Wellington to control cattle movement. The SCS CCC workers focused on controlling soil erosion, including straightening sharp bends and stabilizing banks along the East Fork of the Carson River in Carson Valley. A major flood in 1937 contributed to the development of the Carson Valley Soil Conservation District under the management of the SCS. Led by Wilbur Stodieck, the local extension agent and member of the extensive Stodieck family that ranched south of Minden, the SCS established the district in 1939 with the hope of educating local ranchers about good soil conservation practices. The district, established under state law to allow ranchers to build a formal relationship with the SCS, was chaired by Fred Settelmeyer, with Wilbur Stodieck acting as secretary. The SCS did not provide funding or labor for projects, but provided technical expertise and educational programming about good flood control, water diversion, and erosion control practices to aid valley ranchers.[95]

1945 – Present – Diminishing Returns in an Urban State

Since the mid-1940s, the upper Carson area has experienced significant if moderate growth that shifted the nature of its built environment from largely agricultural to a mixture of agricultural land and suburban-style housing. Regional tourism in the mid-twentieth century focused at Lake Tahoe brought a growing number of travelers into the regional economy. In Carson Valley, the low housing costs and quiet atmosphere attracted many of the Lake's tourism workers who commuted to the basin via Kingsbury Grade. Douglas County further attracted state government employees, growing in number as Nevada's economy boomed beginning in the 1950s thanks to legalized gambling, a divorce trade, and copious defense spending, with Carson Valley representing a quieter and removed community. Between 1970 and 1980, the population of Carson Valley tripled, dramatically altering the character of the Valley, including the addition of some light industrial centers north of Minden. It also saw the sale of a great deal of agricultural land for suburban housing projects. These suburban projects, alongside commercial growth in the U.S. Highway 395 corridor, combined Minden and Gardnerville into a connected singular community by the early 1990s, albeit with concentrations of older commercial buildings in the former centers of each town.[96]

With the scale of successful farms and processing operations increasing after 1945, the demands and facilities of Carson and Eagle Valley farmers shifted in response. In 1946, the Minden Butter Manufacturing Company reorganized as a cooperative. Wilbur Stodieck, who had managed the plant since 1943, continued to operate as manager in 1947, when he accepted a position with the state. The cooperative opened an extension in Reno toward the end of the 1940s, switching the brand name to Windmill products. In 1950, the Minden plant expanded to include a milk bottling facility. In the first six months of 1951, the plant processed 221,000 gallons of milk and 35,000 gallons of cream. By this point, demand for dairy products was so great that the Minden plant was purchasing milk and cream from as far away from Fallon, Yerington, and Sacramento. By the early 1950s, the plant was processing all of the output of the Fallon Milk Producers Association, which closed its creamery in the area. In December of 1953, the Minden firm acquired the White Clover Dairy in Sparks. However, the success of the Minden facility was quickly eclipsed by a newer, modern facility near James Canyon north of Genoa in 1959, named James Canyon Ranch and operated by Beatrice Foods. In 1961, the Minden plant shut down, with nearly all of its business, and its laborers, moving to the James Canyon facility. The Minden Butter Manufacturing Company was purchased by Bently Nevada, Inc. in 1969, and was listed in the National Register of Historic Places in 1987 as part of Frederic DeLongchamps' architectural body of work.

[95] Maule, 62; Kolvet and Ford, 55, 57, 61, 66, 134.
[96] Douglas County Planning Department, 6, 55; Hulse, *The Silver State*, 320.

Unfortunately, it was heavily remodeled in 2016, with only the brick façade remaining of the historic building.[97]

The decline in viability for small farms and ranches after the 1940s transformed both the public and private landscape of agriculture along the upper Carson River. After the death of William Dressler in 1946, the Dressler family, under the leadership of Frederick Hugh Dressler, began to downsize the ranch in response to growing inheritance and property tax rates. Fred Dressler maintained prominence in the ranching industry, most notably serving as president of the National Cattlemen's Association. Still reeling from their debt incurred during the Great Depression, the Dangberg family continued to operate their ranch, albeit selling off land periodically and eventually liquidating the last of their properties, the Home Ranch, in 1978. With less demand for grazing on public land, federal agencies also shifted their management practices. The U.S. Forest Service office for the Mono National Forest had already been moved from Minden to Reno in 1939, but the agency maintained a ranger's headquarters in Minden for the Alpine District of the Mono, and later Toiyabe, National Forest. However, in 1973 the Forest Service dissolved the Alpine District into the Bridgeport and Carson Ranger Districts, closing the office in Minden. During the 1970s, the towns of Gardnerville and Minden both expanded significantly and the new community of Gardnerville Ranchos developed, all consuming land that had formerly been used for farming.[98]

In Eagle Valley, ranching coexisted with increased residential and commercial development pushing outward from the town's center along Carson Street. In 1947, Pete and Raymond Borda purchased a section of land at the mouth of Kings Canyon formerly owned by Benjamin King and began to use it as a sheep camp and summer pasture. They wintered their livestock in Dayton, but operated the Kings Canyon property until 1996 when they sold it to the U.S. Forest Service for preservation as open space. Two ranch complexes collectively known as Silver Saddle Ranch, formerly the Bird-Ulrich and Chartz-Herlax ranches, saw a similar transition, as the owner donated the lands to the Bureau of Land Management in the 1990s, with the BLM transferring the property to Carson City in 2012 for use as municipal open space.[99]

Basques in Upper Carson River Ranching

Basque ranch workers proved to be a critical skilled workforce to the sheep-raising industry in the American West, including Carson and Eagle Valleys. Basque migration to the United States in the nineteenth century resulted from both economic incentives in the Americas and social, political, and economic pressures in the Basque Country controlled by that time by Spain and France. Spanish Basques had migrated to the American West beginning with Spanish colonization of the region in the seventeenth and eighteenth centuries. However, political persecution and military conflict in Europe during the nineteenth century compelled greater numbers to leave Spain and France for the Americas. Initially, Basques immigrated to former Spanish and Portuguese colonies in Central and South America. However, with gold and silver discoveries in the western United States in the 1850s and 1860s, Basques from Spain, France, and Latin America moved to places like northern California and Nevada. Records indicate that the majority of migrants to the western United States were secondary migrants from Latin America who had already garnered a reputation for sheepherding on the pampas of Uruguay and Argentina. The availability of public grazing land in the American West, the low cost of land for private use, and the markets provided by nearby mining towns provided a strong economic draw for new immigrant groups such as the Basques. Furthermore, many writers have observed that the environment of the Great Basin was rather similar to that of Euskal Herria of Basque Country.[100]

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[97] Dangberg, *Carson Valley*, 113.

[98] Wynne M. Maule, *Minden, Nevada: The Story of a Unique Town, 1906-1992*, (Minden, Nev.: Wynne M. Maule, 1993), 61; Walton-Buchanan, 38-40.

[99] Moreno, 82.

[100] William A. Douglass, "Basque Immigrants: Contrasting Patterns of Adaption in Argentina and the American West," in *Currents in Anthropology: Essays in Honor of Sol Tax*, edited by Robert Hinshaw, (New York: Mouton Publishers, 1979), pp294-95; Gloria Totoricagüena, *Basque Diaspora: Migration and Transnational Identity*, (Reno: Center for Basque Studies, University of Nevada, Reno, 2005), 10-15; Gloria P. Totoricagüena, *Identity, Culture, and Politics in the Basque Diaspora*, (Reno & Las Vegas: University of Nevada Press, 2004), 66.

Completion of a transcontinental railroad network in the United States facilitated Basque travel to Nevada among other Great Basin destinations by the 1870s. Generally, Basques from the three French Basque provinces and Spanish Basque Navarre settled in California or southern and western Nevada, while those from Bizkaia (later called Viscayans) usually chose Idaho, eastern Oregon, and northern Nevada. Although gold and silver prospecting was the first draw for Basque immigrants, those who did not find wealth in the mining districts moved into the ranching industry, predominantly sheepherding which was a relatively accessible industry with a low opportunity cost, and that many had refined from time spent in Latin America. Their success in the western United States created a strong cultural association between Basques and sheep ranching in the region.[101]

The first Basques to arrive in northern Nevada came primarily to seek their fortunes in the gold and silver fields, with the initial intent to return home after accruing sufficient financial gains. However, like most prospectors, many found more lucrative and long-term employment in the ranching industry. Those Basque immigrants who achieved success in mining towns, either by prospecting themselves or opening related businesses, often settled into banking, cattle ranching, or other long-term industries. However, sheepherding became associated most closely with the Basques of the western United States, despite the fact that those who engaged in the practice were generally newcomers of modest means who relied on unregulated public rangelands for their success. They faced unique challenges that compelled many to permanently settle in the region. Among the more successful long-term ranchers were the Altube Brothers, who founded the famed Spanish Ranch in Elko County and operated it from 1871 to 1907. In Carson Valley, the first Basque rancher who eventually grazed his sheep in the region was Francisco Yparraguirre, who immigrated from Echalar, Spain to San Francisco in 1877 at the age of thirteen. Francisco first worked in San Francisco at his brother's hotel, the Yparraguirre, located on the southwest corner of Powell and Broadway. He later worked on the family's sheep operation in the San Joaquin Valley in Fresno. With impending drought, by 1887, Francisco and his brother Pablo purchased the Sweetwater Ranch in Lyon County, Nevada, consisting of over 2,300 acres where they ranched until 1942. Many other Basque individuals followed by the 1900s, either running sheep in the Carson Range or the Pinenut Mountains, or operating businesses such as the Eastfork Hotel and Ferris Tavern in Gardnerville. Among those who lived in the area the longest were Jose and Josephine Incaby Sarbo, who arrived by the 1880s and settled in Gardnerville, running sheep at various operations throughout the region in Carson and Smith Valleys.[102]

Despite the notoriety of some Basque businessmen like the Altubes, Basque numbers in Nevada remained low through the late-nineteenth and early-twentieth centuries. This was in part due to a general anti-immigrant sentiment in the United States, but was aggravated by competition over public grazing land that fueled tensions between established ranchers and the new itinerant Basque sheepherders. While the recorded numbers of Basques in censuses in California, Nevada, Idaho, and Wyoming are difficult to trace, records suggest that prior to 1900, there were very few Basque residents in the region. Those who did move into the Great Basin were mining entrepreneurs, or participated in the sizeable exodus of sheep from the California ranges into the Great Basin in the late-nineteenth century. A resurgence in the wool market in the early 1900s compelled Basque sheep ranchers to expand their operations, and they called upon family ties remaining in the Basque Country to send more workers. Influenced by this trend, between 1900 and 1910, the number of officially recorded Basques in Nevada went from 180 to nearly a thousand just ten years later. Nevada's geographic location, its

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[101] Totoricagüena, *Basque Diaspora*, 10-15, 203, 206; Totoricagüena, *Identity, Culture, and Politics*, 66; U.S. Department of the Interior, National Park Service, *Hispanic Reflections on the American Landscape: Identifying and Interpreting Hispanic Heritage*, by Brian D. Joyner (Washington, D.C., 2009), p 41; Howard Wight Marshall, *Paradise Valley, Nevada: The People and Buildings of an American Place*, (Tucson: University of Arizona Press, 1995), 9; William A. Douglass, *Global Vasconia: Essays on the Basque Diaspora*, (Reno: University of Nevada, Reno, Center for Basque Studies, 2006, 134.

[102] M.L. Miranda, *A History of Hispanics in Southern Nevada*, (Reno & Las Vegas: University of Nevada Press, 1997), 53; Moehring, 153; Clare O'Toole, "The Roots of Basque Character and the First Diaspora to the United States," *Who Are the Basques*, The Basques in Nevada, http://nevadabasque.com/who-are-the-basques/ (accessed June 2, 2015); Carmelo Urza, "The Age of Institutions: Basques in the U.S.," in *Community in the American West*, Stephen Tchude, ed., (Reno & Las Vegas: Nevada Humanities Committee, 1999), 234; Nancy Hamlett, ed., *From the Basque County to the Sheep Camps of the Carson Valley: the Personal Stories of Basque Immigrants*, (Gardnerville, Nev.: Museum Committee, Mendiko Euskaldun Cluba, 2001), iv, 1-2, 5, 8.

large grazing lands for sheep, and its position as a transportation crossroads between several regions of the American West, meant that it also became a cultural crossroads for the various Spanish and French Basques of the region. As Basque ranchers utilized the transportation networks to move their livestock, other Basque entrepreneurs established hotels, restaurants, and boarding houses along the same routes.[103]

Basque homes and businesses provided environments where Basques native to the United States as well as newly arrived immigrants could meet in familiar surroundings. The Basque boarding house, or *ostatua*, became one of the most endemic representations of this phenomenon in northern Nevada communities. Boarding houses not only were a familiar environment for communal gatherings, but also provided housing for new arrivals who were largely employed on a temporary basis. Established Basque sheep ranchers often hired newly arrived immigrants to handle sizeable herds numbering upwards of 2,000 animals. In the spring and summer months, these workers remained on the range with the herds as they foraged on upland and mountain grasslands. In winter, the herds were brought in to the permanent ranch where there was shelter and feed, and the workers would stay in boarding houses in the community. Many young Basque workers moved between jobs frequently, leading to a partially transitory lifestyle where workers might balance time between work in the United States and residence with their families in Basque Country. Some stayed in Nevada looking for more permanent employment in nearby cities, which they found with increasing frequency in the late-twentieth century.[104]

African Americans in Upper Carson River Ranching

African American migration to the western United States began in in the mid-nineteenth century with small numbers of freedmen and their families moving to western states and territories. Kansas and California received the greatest numbers, in part, because they offered the greatest freedoms and opportunities. Other western states, especially those with a stronger anti-slavery culture, followed suit. Those that moved to Nevada tended to engage in the mining and merchant industries, although a small number went into ranching. The importance of mining to black economic opportunity in Nevada was clear in the movement for black male suffrage. As the push to ratify the Fifteenth Amendment began in earnest in the late-1860s, it was black men and women from the Comstock rather than Carson Valley that led the effort that ultimately made Nevada the first state to ratify the Amendment.[105]

The relatively small number of black ranchers and farmers in Nevada makes the contributions of Ben Palmer to ranching along the upper Carson River noteworthy. Considering the well-documented role of African Americans in supporting the southern cattle ranching industry, from South Carolina west to Texas, it is possible that Palmer had worked in cattle ranching as a slave before purchasing his freedom and moving west. A small number of black men, around 1600 individuals by 1890, either supported or owned ranching operations throughout the western territories and states. As mentioned previously, Ben was a freeman from Missouri and arrived in Carson Valley in 1853 and established a 320-acre ranch in what became known as the town of Sheridan, a small black community anchored by three early black and interracial families, the Palmers, Barbers, and Millers. It is believed Palmer and his sister, Clarissa Church, purchased their way out of slavery. Church married a white man named David (or D.H.) Barber, and the couple chose to settle just north of Palmer on a 400-acre ranch, raising their seven children. The small community of Sheridan that grew up around these three ranches became both a ranching hub and a waystation for travelers, with Clarissa Barber becoming well known in the valley for her hospitality. These ranchers employed a combination of black, Indian, and white ranch hands and built some of the most successful operations in western Carson Valley. All three ranches are still

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[103] Totoricagüena, *Basque Diaspora*, 206-214, 249-250; O'Toole, "The Roots of Basque Character"; Jeronima Echeverria, "Expansion and Eclipse of the Basque Boarding House in the American West," *Nevada Historical Quarterly* 43, No. 2 (Summer 2000), 127, 129; Douglass, *Global Vasconia*, 136-137.

[104] Totoricagüena, *Basque Diaspora*, 206-219; Echeverria, "Expansion and Eclipse of the Basque Boarding House," 133-134.

[105] Quintard Taylor, *In Search of the Racial Frontier: African Americans in the American West, 1528-1990*, (New York: W.W. Norton & Co.), 104-105, 122.

present, although the three African American families that established them left by the early-twentieth century, selling their property to others in the valley. Palmer's ranch is now the Colyer Ranch, with most of the land now developed as part of southern Sheridan. The Barber ranch is similarly mostly developed, although the barn remains on the Scott Ranch. Perhaps best preserved is the former Miller ranch south of Sheridan, which was acquired by the renowned Scossa family and is still operated by them today. Although the overall narrative of African Americans in the ranching industry of the American West has received scholarly attention, research regarding their experience and contributions in the Great Basin, Nevada, and the upper Carson River demands additional research.[106]

Women in Upper Carson River Ranching

The history of women in ranching in Nevada is an understudied topic. Although the role of women on the domestic front during the mid-nineteenth through the mid-twentieth centuries is generally known and included in social histories of ranching throughout the United States, very little scholarship has been published on women who owned and operated ranches. Certainly, women were a critical part of any ranch's labor force. A rancher's wife was typically the head of household, managing the day-to-day operations of the main ranch house, and preparing and supplying food to the working hands, whether family or hired help. Women usually also managed the poultry and garden on any particular ranch stead, providing fresh produce as well as supplemental income to the household.[107]

However, the primary sources related to ranch ownership and management indicate that a small but significant percentage of ranches, at least in Douglas and Ormsby Counties, were owned directly by women, although the level of involvement in ranch operations remains to be established by future scholarship. Of the 412 land grants issued in Douglas County by the Carson City Land Office between 1862 and 1940, the office granted 62 of them in whole or in part to 54 individual women, equaling approximately 15% of all land grants issued during that period. In Ormsby County to the north, of the 128 land grants issued in the same period, 17 were issued in whole or in part to ten different women, an approximate total of 13.3% of all land grants during that time. These numbers suggest that, despite established norms regarding the division of household responsibilities, labor, and property ownership during the Victorian and Progressive eras, a significant minority of ranches were owned and operated by women. The land grants suggest that in most cases, these women owned their ranches outright, although in some cases, their name appears alongside that of man with the same surname, suggesting that they were a married couple that shared a legal stake in the operation of the ranch. It is also possible that some of these land claims were made to enhance family-owned acreage in the valley, with land transfers to a male head of household soon after purchase from the federal government. Anecdotally, Elizabeth Kirman appears to have amassed a sizeable ranch at the north end of Carson Valley near the southern end of Jack's Valley by 1899, controlling most of the access to that portion of the Carson River. That ranch appears to have been sold off by 1913 to C.L. and Clara Fulstone and to Fred Cook. As another anecdote, it appears a Mrs. A. Helwinkel, who owned a 151-acre ranch straddling the Carson River in the 1920s, participated in the University of Nevada Agricultural Experiment Station program during that time, providing data to the extension about her operations and the cost of running her dairy farm. Further research is needed regarding this topic to further understand the role of women in the ranching landscape of the upper Carson River, Nevada, and the American West.[108]

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[106] Taylor, 56, 156-157; Dangberg, *Carson Valley*, 3, 8, 40; *The Historical Nevada Magazine*, 82-83; Elliott, *History of Nevada*, 51, 116; Ed Johnson, "The First Black Rancher," *Nevada Magazine*, (January/February 1989), 27.

[107] Ruth B. Moynihan, Susan Armitage, and Christiane Fischer Dichamp, eds., *So Much to Be Done: Women Settlers on the Mining and Ranching Frontier*, (Lincoln: University of Nebraska Press, 1990), xi-xxii; In the oral history accounts related to Carson Valley ranching (see bibliography), regular mention is made of the contributions of women to the operation of ranches, specifically in operating the garden, preparing meals to the family and all staff on a given ranch, and conducting nearly all household businesses aside from crop or livestock production.

[108] Statistics compiled by the author from search results for both Douglas County and Carson City records of the General Land Office, https://glorecords.blm.gov/default.aspx, accessed March 2, 2017; W.W. Coleman, "Kirman Ranch, Carson Valley, Nevada," 1899; and Robert A. Allen, "Map of Carson Valley Lands," [1913], Robert A. Allen Papers, NC 97, and "Mrs. A. Helwinkel," 1929, Box 2 (maps), Fleischmann College of Agriculture – Agricultural Experiment Station Records, AC 0288, UNR.

Washoe and Paiute Indians in Upper Carson River Ranching

Perhaps one of the most important absences in the records and scholarship pertaining to ranching in this region is a generally limited consideration for the Washoe and Paiute. For the Washoe, Carson and Eagle Valleys were part of their ancestral homeland. The Paiute, eastern neighbors of the Washoe, were quite familiar with the region through trade networks and travel. Mormon and other Euro-American settlers largely ignored their claims to territory, in part, because they failed to recognize how the Washoe and Paiute associated with the land. Richard Allen, an early visitor to Carson Valley, documented how Washoe and Paiute tribal members adapted to the new economy. Many opted into the farming and ranching economy as a new means of survival, either working on ranches, or, in a few rare cases, making their own land claims and ranching themselves. By the fall of 1857, Richard Allen noted that while the Washoe were considered hostile at the time, many of the local ranchers employed Paiutes as "rancheros" and spoke quite highly of them. References to Washoe and Paiute tribal members by ranchers such as the Dangbergs and Dresslers is frequent but passing, but usually mentioned the high quality of the work completed by Washoe and Paiute ranch hands. In a 1984 oral history interview, Fred Dressler, grandson of August Dressler, mentioned that the family regularly employed Washoe tribal members for piece work, including in the house, in the yard and garden, or in the fields. He also recalled playing with Washoe children during his youth, and of picking up elements of Washoe language in the process. Recordings by ethnographers, and the written documents and oral traditions of the Washoe Tribe of Nevada and California reinforce the narrative that the Washoe were an important labor force in the development of Washoe County's ranching landscape. Washoe ranch hands and household workers often lived in *dung-al*, homes that were usually made of canvas and boards provided by the ranch owner, or with willow branches from nearby rivers and streams.[109]

The Washoe memories, both personal and collective, are mixed. While ranching became an important source of income for many Washoe families in the decades following Euro-American colonization of northwest Nevada, their farm labor does not appear to have been consistently voluntary. Most Washoe families attempted to continue traditional practices to some degree after the 1860s, which meant leaving ranches during pine nut harvest season in the fall, leading to frustration from ranchers. Washoe recollections of the time period include requirements to carry work cards during the First World War, and the forced removal of Washoe children from their families to live with and work on area ranches under the Bureau of Indian Affairs' Outing System operated between 1878 and 1930. In 1938, 21 years after the creation of the Dresslerville Colony southeast of Gardnerville, the Washoe Tribe acquired the 400-acre Heidtman ranch and the 200-acre Faletti Ranch, and began using those properties as ranch land for tribal members. The complexities of the Washoe relationship to regional agriculture, as both an anathema and a benefit, deserve further research in order to provide a better appreciation of the significance of the Washoe and Paiute experiences in ranching after colonization of the region by Euro-Americans.[110]

[109] Allen, October 9, 1857, Thompson, 3 and August 25, 1859, Thompson 79, and October 22, 1859, Thompson, 90, and December 27, 1859, Thompson 105-106; Dressler, 4, 16; "Reno-Sparks Indian Colony," undated report, provided by Darrel Cruz, Washoe Tribe of Nevada and California, March 22, 2017.

[110] Darrel Cruz, e-mail correspondence and research notes to the author, March 9. 2017; Robert A. Trennert, "From Carlisle to Phoenix: The Rise and Fall of the Indian Outing System, 1878-1930," *Pacific Historical Review* 52, No. 3 (Aug. 1983), 267-270, http://www.jstor.org/stable/3639003?origin=JSTOR-pdf&seq=1#page_scan_tab_contents.

Barn Architecture in Carson and Eagle Valleys, 1850-1950

Like agricultural landscapes throughout the United States, the design and workmanship of barns in Nevada are highly variable, both in function and in the building traditions of those who made them, lending themselves to the study of vernacular architecture. Architectural historian Thomas Hubka has divided American barn building into two phases, the first being the importation and distribution of European barn styles throughout the continent, and the second being the adaptation of barn building techniques to the American environment. The latter trend typifies barn construction in Carson and Eagle Valleys, where ranchers adapted European barn-building techniques from England, Germany, and Holland to the environment of northwest Nevada, including its high winds, highly variable temperatures, and suitability for livestock raising over intensive farming.[111]

Barn construction nation wide in the late-nineteenth century increasingly utilized the products of the Industrial Revolution, namely standardized lumber and easy market access to railroads, to transform the structure and materials that went into barns. Plank-frame and balloon-frame structures made mortise-and-tenon joinery increasingly obsolete by the late-nineteenth century. These newer forms allowed for higher barns with larger lofts and unique rooflines while using less material than older log and stone constructions. Access to new, cheap materials such as manufactured glass, steel, concrete, and bricks helped reduce the cost but increase the strength and utility of barns, and the advent of agricultural schools in most states by the 1880s allowed for a more scientific approach to barn construction that could be implemented by rank-and-file farmers. The Sierra Nevada region, with Carson and Eagle Valleys included, appears to be an exception to these trends.[112]

Since 1940, as agricultural production became more industrialized, the use and function of barns on larger ranches became different, and sometimes obsolete. Hay was no longer stored loosely, but baled, and in the large ranching environments of northern Nevada, baled into square or round bales in excess of 1000 pounds, requiring larger barns. In many cases, farmers and ranchers added modern open-walled steel structures, often called pole barns, to shelter hay and ensure it remained ventilated. Furthermore, with work animals largely replaced by tractors, and with tractors and other equipment of a size that can no longer fit in most pre-1940 barns, the barn is frequently a marginalized building in modern farm and ranch settings.[113]

Barn Construction in Carson and Eagle Valleys[114]

The availability and proximity of large, high-value timber stands through the Sierra and the Tahoe Basin, as well as the lack of efficient railroad connections into the region prior to the 1900s, meant that heavy timber framing remained a popular barn construction method in Carson and Eagle Valley into the early twentieth century. The fusion of new technology, older and ethnically-inspired building traditions, and the open, arid, environment, created what historic timber framer Paul Oatman has termed the Sierra Nevada barn. Many of these barns in Carson Valley incorporate heavy timber framing and mortise-and-tenon joinery, reflective of their construction prior to approximately 1920. Many of the surviving barns were constructed after the mid-1890s in response to a growing popularity of Carson Valley dairy products. The barns provided hay storage and shelter for dairy animals, as well as equipment storage and milking space. However, barns on some of the older ranches in Eagle, Carson, and Jack's Valleys date to the 1860s and 1870s. Barns in the Carson Valley appear to exhibit blended construction techniques of Dutch, German, and English origins that are present in barns along the Carson and Truckee watersheds.[115]

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[111] Paul F. Starrs, "The Barn Where it Belongs," in Stephen R. Davis, *Sagebrush Vernacular: Rural Architecture in Nevada*, (Reno: Nevada Humanities Committee, 2003), 22-23, 25; Paul Oatman, "Timber Frame Barns of Carson Valley," in Davis, *Sagebrush Vernacular*, 27; Dangberg, *Carson Valley*, 112; Chere Jiusto & Christine W. Brown, *Hand Raised: The Barns of Montana*, (Helena, Mont.: Montana Historical Society Press, 2011), 2, 7.

[112] Jiusto & Brown, 7.

[113] Starrs, "The Barn Where It Belongs," 23.

[114] As the best, and frequently only, published resource on Sierra Nevada barn framing and architectural history at the time of this form's drafting, much of the material below has been adapted from the various publications of Paul Oatman, timber framer and builder from Pioneer, California.

[115] Paul Oatman, "Sierra Nevada Barn Evolution," *Timber Framing: The Journal of the Timber Framers Guild* 102 (December 2011): 8.

Despite the cultural fusion in barn-building that took place in along the Sierra's eastern front, English techniques remained dominant throughout much of Carson and Eagle Valleys. English barns tended to be a three-bay design constructed of braced timber framing using mortise-and-tenon pins, usually having a side-gabled configuration. On the ground floor, the central aisle is for pulling in wagons, or for threshing and winnowing grain, with side aisles being for produce, hay, or equipment storage, or corral space for working livestock. A hay loft is usually present on the upper level of the barn. As English building traditions adapted to the American continent, although the design of the barn did not change greatly, its use did. Where traditional English farms had buildings with specific uses, American farmers adapted this style to multiple uses, storing hay and grain, but also sheltering various kinds of livestock. Several variations emerged throughout the country, including a front-gabled version on a center aisle plan that emerged from eastern Tennessee, allowing for side aisles to house milking cribs and other facilities. In Carson Valley, Jackson Hay Forks became ubiquitous, running along a track in the hay loft, including a doorway on the upper level to allow for ground-level loading from one or both of the barn's gable ends.[116]

German barns vary from the English in that they incorporate larger livestock space on a third, lower level. They still tend to have a gable or gambrel roof, but are often built into a hillside so that both the lower livestock level and the main threshing and winnowing floor can be accessed at grade with wagons. There remains a hayloft for storage in the upper level. What appears to be unique about the barns of Carson Valley is that many of the barn builders were German, but the barns they produced tended to incorporate more English characteristics.[117]

Dutch barns vary significantly as well, being perhaps one of the most long-standing forms of barn construction in the western world, retaining a significant degree of cultural integrity to the original Dutch barns of the medieval period. Dutch barns tended to have entrances on the gable end, and retained a mortise-and-tenon framing system that, in use, extended back to at least 1000 A.D. Most of the more recent iterations of Dutch barns retained the H-shaped anchorbeam bents of earlier barns, were four bays long, and had their members assembled on the ground and lifted into place. However, American iterations of Dutch barns will usually have more horizontal wood siding as opposed to vertical siding or masonry construction, owing to the increased availability of old growth pine and other lumber in the United States compared to Europe. Lastly, most American versions of Dutch barns usually had the barn's frame resting on a sill or wall plate and used a masonry foundation or piers rather than driving posts into the ground, although barns in Carson and Eagle Valley frequently drove anchor beams into the soil to brace them against the heavy winds from the Sierra Nevada mountains.[118]

Oatman, a timber framer who has specialized in documenting barns in the Sierra Nevada, has observed the unique patterns of barn construction throughout the region. Almost invariably, timber frame barns along the Sierra Nevada used the square rule method of framing and frequently created barns with central and side aisles, despite the variations in joinery and overall style. The square rule method involved keeping posts and beams at common lengths, at least specific to each individual barn, allowing parts of a particular barn to be interchangeable. Many include dropped tie beams, a tie beam which is below the top plate, meant to keep the tenons within the walls and roof of the barn and prevent contact between the elements and the barn's framing system. Earlier barns that predate the introduction of the various hay fork patents in the mid-to-late 1860s will typically have a transverse driveway opening on the eave side of a barn and 30 to 40-foot-wide aisles for pulling large wagons through the middle of a barn to load or unload hay. As a result, these barns tended to be larger, and frequently required additional posts between the purlin posts to support a spanning tie beam. Barns with these features will generally date prior to 1870. The earlier barns also tended to be made of hand-hewn Ponderosa Pine members, likely harvested from the properties that established them. After that time, most barns

[116] Ohio HPO, 143; Jiusto & Brown, 3.
[117] Ohio HPO, 144; Paul Oatman, "Timber-Framed Barns of Carson Valley," *Timber Framing: The Journal of the Timber Framers Guild*, 56 (June 2000), 7.
[118] Theodore H. M. Prudon, "The Dutch Barn in America: Survival of a Medieval Structural Frame," in *Common Places: Readings in American Vernacular Architecture*, Dell Upton and John Michael Vlach, eds., (Athens: University of Georgia Press, 1986), 204-218.

will have a smaller entry on the gable end, meant for storing equipment rather than loading and unloading hay, and will have some form of hay fork on one or both gable ends, with a pulley system on the interior, allowing for expedient loading of haylofts with grass cuttings or alfalfa. Some earlier barns may have been modified to accommodate a trolley by cutting the tie beam from its tenons and lowering it to allow for the trolley.[119]

Barns built after 1870 will tend to have the hay fork paired with the main door on a gable-end, and will have braces running cross sills to posts, allowing bracing in three directions and providing more stability to the barn. Because of the proliferation of a well-organized lumber industry by the 1870s, milled lumber from farther upstream was easier for carpenters to obtain, resulting in a shift in later barns toward frames of sawn Douglas Fir. Because of the high winds in the Sierra, strong bracing was critical, frequently compelling the farmers in region to construct their barn frames with sill-to-plate braces in lieu of knee braces, sometimes referred to as a Continental bracing style. However, it appears this bracing style is conspicuously absent in Carson Valley, only seen along the eastern Sierra farther to the north. The newer barns tended not to have large doors on the gable-end, instead having smaller entries on the side aisles for livestock, and the opening for the hay fork in the gable end. The Scossa Barn along Foothills Road south of Sheridan is a well-preserved example of this construction. It was not until farmers purchased larger equipment and tractors that openings were cut into the barns to store the equipment in the center aisle. Frequently, these will be modifications made to a barn in the 1920s through the 1940s. The new design also added square footage, and saved on the labor and materials no longer needed to build driveways into barns.[120]

Oatman describes further the character-defining features common to most barns in the region:

> All the frames are fastened with softwood pins and foot braces on posts are common, no doubt a necessity to deal with high winds, as in a "Washoe Zephyr." Posts lacking foot bracing have 6 inch tenons, usually double pinned to the 12 by 12 ground plate or groundsill. Only two roof shapes were used. One is a gable roof, usually at a 9 in 12 pitch, and the other is a gable roof over the central aisle with side aisles having shed roofs, or, more poetically, "wings." The majority of barns have a central aisle for hay and side aisles for livestock. Some larger barns, like the Van Sickle barn outside Genoa, have principal purlin posts to support the 32 foot span of the central aisle. The central aisle had no door since hay was loaded with the Jackson Hayfork from the opening at the top of the gable. Openings were later cut in the walls for tractors. Some barns had a side entry in to the central bay through which the hay wagon could drive. The Dressler barn in the Carson Valley is a fine example of a side entry barn.[121]

Some of the earlier barns in Carson Valley constructed by Mormon settlers and their counterparts tend to have long purlins and eave plates, both of which were hand hewn. Some of these purlins and eave plates measured up to 60 feet long with only one scarf joint along their entire length, indicating the quality and height of available lumber from surrounding forests at the time. With the exception of the Van Sickle barn north of Mottsville with has wooden pin fasteners, all scarf joints in valley barns are held together with steel bolts, with the bottom scarf indicating the side of the barn that was constructed first. However, Oatman observed that the region possesses a remarkable plethora of scarf joints in larger barns, indicating a diversity of barn builders and barn building techniques.[122]

Oatman further describes the typical construction method of these barns, specifically those with center aisles:

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[119] Oatman, "Timber Frame Barns of Carson Valley," 27; Oatman, "Sierra Nevada Barn Evolution," 8, 12; Paul Oatman, "Sierra Nevada Barn Evolution II," *Timber Framing: The Journal of the Timber Framers Guild* 103 (March 2012), 10; Oatman, "Timber-Framed Barns of Carson Valley," 7.

[120] Oatman, "Timber Frame Barns of Carson Valley," 27; Oatman, "Sierra Nevada Barn Evolution," 8, 12; Paul Oatman, "Sierra Nevada Barn Evolution II," 10: Oatman, "Timber-Framed Barns of Carson Valley," 7; Paul Oatman, "Timber Frames of Nevada and California," *Timber Framing: The Journal of the Timber Framers Guild* 81 (September 2006), 21 .

[121] Oatman, "Timber Frame Barns of Carson Valley," 28.

[122] Oatman, "Timber Frame Barns of Carson Valley," 28; Oatman, "Sierra Nevada Barn Evolution," 8.

> The ground sills were laid first and were usually 12 by 12 inch timbers, the largest in the frame and in most cases hand hewn even after 1900. These large timbers were needed to support the frame and rested on piers of rock. Next, the central aisle was assembled in a series of "bents" or sections. The purlin or aisle posts and braces were put into place, then the dropped tie beam was added. Each bent was raised, connected with interties and a purlin plate was fitted on top of the bents. The outer side aisle walls were built as one "wall bent" and connected to the main frame with secondary tie beams. A common rafter roof system was built last and united the structure. Finally, all frames were "draw bored." Pinholes in the mortise were laid out approximately 1 and ½ to 2 inches from the edge of the timber where a 1 inch hole was bored. The tenon is laid out the same but set back 1/8th to 3/16th of an inch closer to the shoulder of the tenon so that the joint is pulled tight when the pin is driven in. This is also why all the pins are pointed.[123]

Typical Dutch barn construction in the region involved placing the main entrance on one of the broad gable ends and having low eaves along the long sides. Variations of Dutch barns along the Sierra tend to have tapered rafters. English barns usually had entrances on both long sides, permitting wagons to enter and exit without turning around. Late-nineteenth century upper Bavarian barns often had a first level built out of stone, the upper sections built of wood frame with weatherboarding, and had sliding doors to replace hinged doors. The lower floor might contain a threshing floor, horse and cattle stalls, and a storage room, while the second level would house a granary if there was one, and space for hay storage. There might also be a hayloft above. Frequently, barns would have their wood shingle roofs replaced with corrugated metal prior to 1900. In the early twentieth century, as Carson and Eagle Valley ranches turned to dairy farming to a higher degree, many barns were retrofitted with milking equipment and separators.[124]

The Winters/Schneider Ranch in Jack's Valley has three timber frame barns, one of which is one of the only examples of a dog trot (also called double pen and drive) barn in the region. The Schneider dog trot barn has hand hewn logs, one of which is 67 feet long and uses squared logs that are stacked and notched at the ends.[125]

Barn Builders

Not much is known of those who constructed barns in Carson and Eagle Valleys but clues to the individuals involved, their backgrounds and skills, and their prominence in the regional economy can be found in contemporary sources. The 1881 *History of the State of Nevada* lists 118 carpenters' shops in that year in the State of Nevada alone, second in number only to teamsters, the vital supply lifeline for the region's mining and farming communities. Carpenters generally received a higher wage of around $7 a day, compared to $4 a day for miners.[126]

The Gansberg barn along Foothill Road outside Genoa was apparently built in 1910 by a master carpenter named William Thran, with the beams hewn by Henry Arnett, a member of the Washoe Tribe. Gansberg's other barn, which was saw-milled, was constructed in 1914 by Henry Manke. The dogtrot Schneider barn in Jack's Valley mentioned above was possibly built by Chinese laborers as early as 1850, although this has not been confirmed.[127]

[123] Oatman, "Timber Frame Barns of Carson Valley," 28.
[124] Carole Rifkind, *A Field Guide to American Architecture*, (New York: A Plume Book-New American Library, 1980), 248, 272-273; Davis, *Sagebrush Vernacular*, 42.
[125] Oatman, "Timber Frame Barns of Carson Valley," 29.
[126] Oatman, "Sierra Nevada Barn Evolution," 8
[127] Oatman, "Timber Frame Barns of Carson Valley," 29.

F. Associated Property Types

The property types included in this document for agricultural resources along the upper Carson River in Carson and Douglas counties include the types of resources that are most likely to be eligible for the National Register of Historic Places (NRHP). Agricultural production creates a built environment including buildings, structures, objects, sites, and districts. The property types outlined below are the most likely units by which resources associated with agricultural activities in this region between the 1850s and the 1970s can be nominated to the National Register. Although there has been a great deal of research and published work about agriculture in this area, very little of that research has been focused on the eligibility of associated resources for the National Register of Historic Places, nor has any formal survey of farms and ranches in the region been undertaken prior to this report. Agricultural survey for NRHP eligibility in Nevada is generally limited, with the bulk of research being individual ranch evaluations in advance of federal undertakings such as highway or mining projects. The only regional surveys currently on file are for Mason Valley in Lyon County, and western Washoe Valley in Washoe County, both completed in the 1980s. The primary framework for property types under this context has been taken from the 2008 Multiple Property Documentation Form *Agricultural Resources of Boulder County*, Boulder County, Colorado (NRIS# 64500987). As mentioned above, the selected property types indicate what resources would be eligible for the National Register individually. The Ranch Complex property type has received the most attention, as based on field survey and research, most resources will be eligible as components of a larger site or district. Since survey for this effort was primarily windshield and reconnaissance-level documentation, refinements to the property types, or additions of new property types, especially as potential contributing elements to ranch complexes, may be warranted in the future.

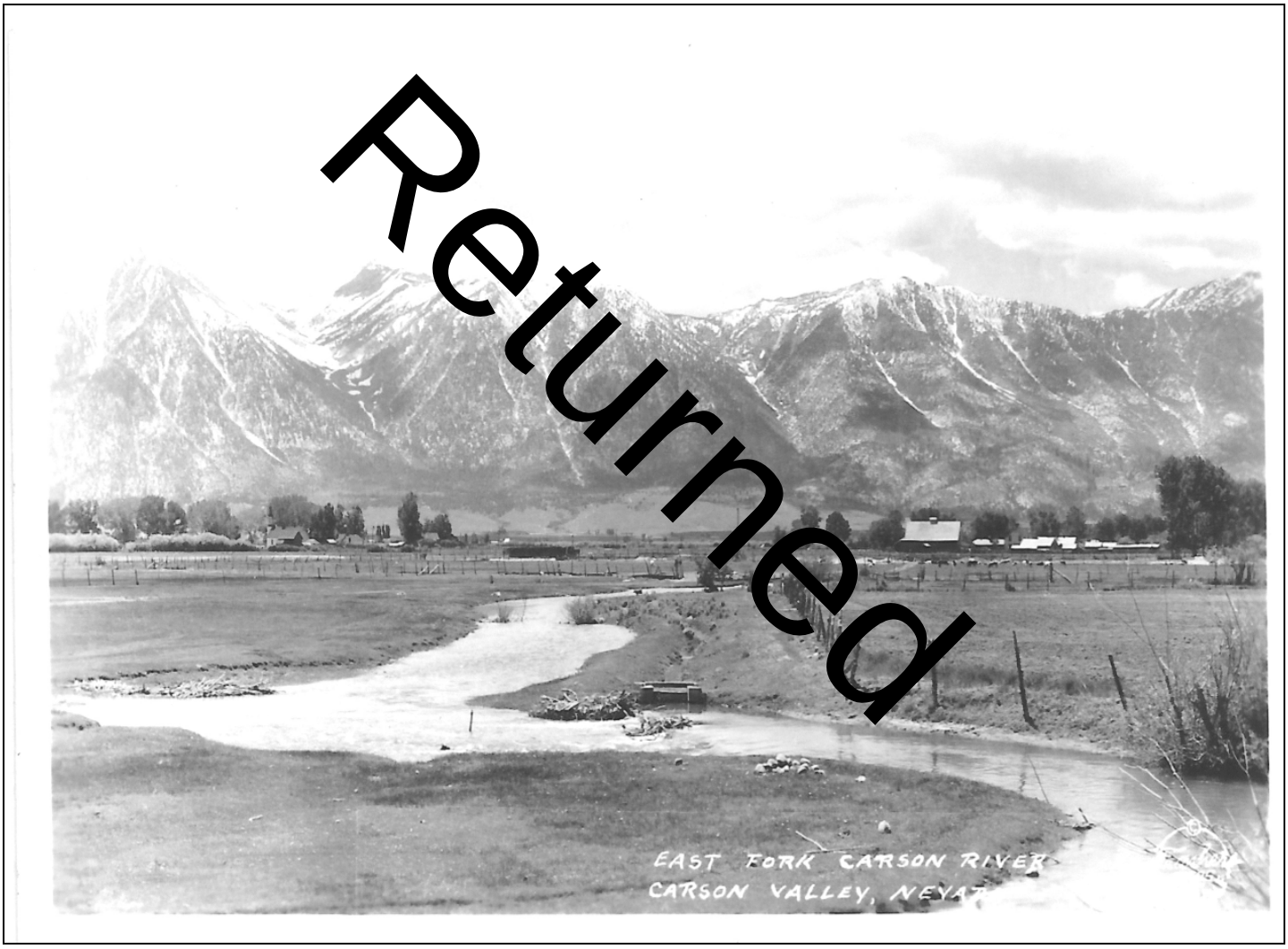
Because of the geographic development of Douglas County and Carson City over the twentieth century, many of these farm and ranch properties will be found in suburban or urban landscapes. This document considered the manufacturing and processing facilities associated with agriculture in both counties, since many of the key ranching personalities established horizontal integration of their processes, owning not only the land and livestock, but the mills and creameries as well, as is the case with the Dangberg Land & Livestock Company in Carson Valley. Although many of the ranches included in this multiple property documentation hosted small schools, schools have not been included in this document, and should be evaluated under the separate state-wide MPDF, *Schools in Nevada*. Furthermore, the social institutions, such as social halls and commercial resources, have not been included, as especially in Douglas County, these resources are nearly impossible to separate from related but separate contexts regarding community planning and development and commerce in communities like Carson City, Minden, Gardnerville, and Genoa.

Because of the nature of agricultural development in northwest Nevada, the primary unit of analysis and evaluation has been the combined ranch complex. Although there are many buildings, structures, objects, and sites that contribute to the operation of the ranch, few will be significant individually, except perhaps barns, ranch houses, and primary irrigation canals. Even in these cases, ranch houses and barns will almost invariably be contributing to the larger unit of crop or livestock production if they retain sufficient integrity. As a result, most agricultural resources should be evaluated as potential historic districts under the “Ranch Complex” property type. Some examples of property types may not be individually significant but might be contributing to a larger concentration of resources related to agricultural resources in this area, meaning that many property types will have common attributes. This is especially true of areas of significance and registration requirements, and as such, those common items are discussed first.

Significance – General

Criterion A

All property types within this MPDF will be potentially significant under Criterion A in the area of *Agriculture* for their association with historic agricultural activities, including farming, ranching, and agricultural processing in the Carson River watersheds of Carson and Douglas counties in the nineteenth and twentieth centuries. Although diversification of agriculture occurred throughout the historical period outlined above, the dominant agricultural activities in the valley consisted of dairying and beef cattle production, sheep raising, poultry production, and hay cutting. Although other activities occurred, including fruit and vegetable growing, hog raising, and horse raising, none of these rose to the level of dominance that the cattle and hay industries did in Carson and Eagle Valleys. Subsequent commercial and residential growth in the area has infringed upon agricultural land and property, leading to the loss or damage of many significant properties among the following property types.



Historic image of the William Lampe Ranch looking west to the Carson Range of the Sierra Nevada Mountains. Hussman Company Ditch flows through the foreground. Photograph likely dates from 1932, as Burton Frasher, Sr., the photographer for Frasher's Foto Postcards, took similar pictures of Carson Valley in that year. Courtesy of Jacobs Family Berry Farm.

Agricultural resources nominated under this MPDF may also be significant under Criterion A in other areas, such as *Exploration/Settlement*, *Commerce*, *Conservation*, *Ethnic Heritage* or *Transportation*. Many of these latter associations will generally need to be evaluated on individual basis, although some of these are discussed in the individual property types. Properties significant to the early settlement of Carson and Eagle Valleys by the LDS Church among others may be nominated under *Exploration/Settlement*. Properties that became important in the buying, selling, and trading of goods, such as a dairy, poultry factory, mill, or supply station

might be nominated under *Commerce*. Properties such as a drift fence built by CCC workers in the 1930s might be nominated under *Conservation*. A property such as a barn or ranch house associated with important African American or Basque ranchers in Carson or Eagle Valleys might be significant under *Ethnic Heritage*. The context above has revealed that the community of Sheridan in Carson Valley was initially settled by the Palmer, Barber, and Miller families, all African American or of mixed marriage. Resources remaining from their operations are likely to have significance in the area of Ethnic Heritage with state-level significance as a rare reflection of African American ranching in Nevada. A roadway or railroad-related property associated with transporting agricultural goods out of Carson and Eagle Valleys may be significant under *Transportation.* In general, areas of significance should be selected sparingly, and used only when the property in question can demonstrate and reflect clear significance within that area, not merely association.

The Dressler Ranch complex along Dressler Lane. Nevada SHPO, July 7, 2016.

Criterion C

Many resources nominated under this MPDF may possess significance under Criterion C in the areas of *Architecture*, *Community Planning and Development*, or *Engineering*. In these areas, agricultural resources may be significant for the distinctive design, form, or construction characteristics that are associated with their use for agricultural production or processing. The residences associated with the farms or ranches may possess high artistic values or may be strong examples of typical types or styles of popular architecture of the period. The resources' craftsmanship, materials, construction methods and sometimes design plans are reflective of their historic function in agriculture, sometimes highly specialized. For example, a barn that reflects a unique adaptation of German and English barn-building styles and joinery, such as the Wilhelm Lampe Barn south of Gardnerville, might be significant under Criterion C in the area of *Architecture*. A ranch complex built by a prominent rancher or ranching company that provided a master-planned community for ranch hands and their families, such as the Buckeye Ranch built by the Dangberg Land & Livestock Company, might be nominated under Criterion C for *Community Planning and Development*. An irrigation canal that introduced a particular type or design of such a canal to Carson Valley might be nominated under Criterion C in the area of *Engineering* for its reflection of important irrigation engineering developments in the region.

The Van Sickle Station Barn along Foothill Road, and the only known barn in Carson Valley to strictly follow German-style barn construction. Note the three levels, with a basement-level livestock space (right), a reinforced main floor for wagons and equipment (entry is on the south side not shown, with a graded dirt entry), and a hay loft above. Nevada SHPO, November 24, 2015.

Criterion B

The majority of agricultural resources that are eligible for the National Register will be eligible under Criteria A and/or C. However, resources may be eligible under Criterion B for their association with significant individuals as well. The prominence of Carson and Eagle Valleys in Nevada's agricultural development, and the location of the capital city within the region, meant that many farmers and ranchers rose to prominence as economic leaders, political leaders, or both. For example, several individuals within the Dangberg and Dressler families not only developed some of the largest agricultural operations in Carson Valley, but served in the state legislature representing the region's agricultural interests, and helped develop the irrigation companies such as the Alpine Land and Water Company that provided critical water supplies to the region's farmers and ranchers. As a result, properties associated with the significance of these individuals, such as the Dangberg Home Ranch (NRIS# 80002466), the Dressler Ranch on Dressler Lane west of State Highway 88, and the Settelmeyer Ranch on Genoa Lane west of U.S. Highway 395 may be eligible under Criterion B in the areas of *Agriculture* or *Commerce* among others, if they have sufficient integrity.

The Dangberg Home Ranch, showing the main ranch house (left), and several ancillary buildings. The ranch was listed in the National Register of Historic Places in 1980. NVSHPO, July 7, 2016.

It is important that any property evaluated or nominated under Criterion B not only be associated with a prominent individual, but that the property played a key role in that person's significance to local, state, or national history. Since many of Carson and Eagle Valley's most prominent individuals were prominent, in part, due to their success and influence in the state's agricultural network, primary ranch complexes or ranch houses may be good indicators of this significance. Mere association with, or temporary ownership by, a significant individual is not sufficient to demonstrate eligibility of a property for the National Register. These properties should possess clear integrity to the time period during which the significant individual owned, operated, and/or conducted their business at the property.

Criterion D

Some properties may be eligible under Criterion D for their potential to yield future information to the study of agriculture along the upper Carson River. That information potential is not limited to archaeological features or sites, and may relate to buildings or structures that possess strong research potential. However, some ranch properties may possess resources, both archaeological features and buildings, structures, or other built resources, that could yield important future information about agriculture in the area. For example, a barn or shed type that becomes important in dating that property type, construction expertise which affected the evolution of a local building technique, local availability of materials, use or ethnic associations, etc., may be eligible under Criterion D in the area of either *Agriculture* or *Archaeology*, or both. As another example, the site of a former Chinese farm labor camp or African American homestead that has been completely razed, but its archaeological features remain and can shed light on the contributions of these groups or individuals to local or state history, would also be eligible under Criterion D in the same areas, as well as *Ethnic Heritage*. It is important to note that most ranching properties will have some degree of archaeological resources within their boundaries, such as a trash midden or former privy site, but many may not be significant for their information potential, and thus not significant under Criterion D. In most cases, archaeological resources related to ranching will be contributing resources to a larger historic district under Criterion A or B.

Period of Significance

A period of significance for a particular agricultural property must be defined based on the individual circumstances, historic use, and significance of the place in question. Under Criterion A, the period of significance will be the period during which the individual resources or the ranch complex contributed significantly to the theme of agriculture within the Carson and Eagle Valleys. Under Criterion C, the period of significance will be the year or date of construction, and the date(s) of significant alterations with architectural importance, if applicable. Under Criterion B, it will be the period during which the important individual occupied the property and made their contributions to local, state, or national history. Under Criterion D, like Criterion A, it will be the period of occupation or use related to agriculture in the area.

Since agriculture continues to be an important part of the economic development for certain areas covered in this MPDF, especially in Carson Valley, it is possible that historic districts will have continued use as agricultural sites more recently than fifty years, potentially up to the present. For resources within those districts, referred to as "Ranch Complexes" as a property type, to be considered *contributing resources* if they were built less than fifty years ago, the following conditions must be met:

1. The majority of resources in the district are over 50 years old.
2. The district's resources are clearly related to significant agricultural developments in Carson and Eagle Valleys.
3. The district's period of significance, both beginning and end, are clearly justified within the historic developments of this MPDF and the property being nominated/evaluated.
4. The resources within the district date from the justified period of significance and are associated with the district's area of significance.

For example, a Ranch Complex with demonstrated significance in *Agriculture* in Carson Valley that was primarily developed in the 1910s, but which experienced alteration in the late-1970s in response to a shift to poultry production, including the construction of several chicken coops, could consider those chicken coops to be *contributing resources* even though they had not yet achieved 50 years of age. If the majority of contributing resources in an eligible Ranch Complex were built more than 50 years ago, an argument for exceptional significance need not be made for the resources less than 50 years old. However, if the majority of resources within a Ranch Complex are less than 50 years old, than the nominated district would need to meet Criteria Consideration G.

Louis Stodieck Ranch, c.1940s, looking northeast. Courtesy of the Douglas County Historical Society.

Associated Property Type: Ranch Complex

The term "ranch" emerges from the Castilian Spanish word *rancho,* which only garnered its association with places of livestock raising in Spanish colonial Mexico. Geographer Paul F. Starrs defines a "home ranch" as the fundamental unit of livestock operation in the western United States. While the home ranch includes a multitude of pieces and parts, Starrs identifies the ranch as a foundation for ranching culture, being the economic and social hub of ranching operations, especially since the passage of the Taylor Grazing Act of 1934. Ranch steads were a necessity of ranching operations, borne out of competition with homesteaders by the 1870s, severe winters in the 1870s and 1880s that required a different conception of winter livestock management, and the increasing enclosure of the western rangelands by the end of the nineteenth century. Although varying in size from small family operations to large company complexes, ranch complexes throughout Nevada, including Carson and Eagle Valleys, take on the shape of a small neighborhood. Most had a degree of self-sufficiency, possessing fuel storage, a power supply, water sources, social order, and on the larger ranches, cultural institutions.[128]

The Lompa Ranch barn and ancillary structures along Fifth Street in Carson City. Nevada SHPO, July 7, 2016.

Ranch complexes include a large array of resources related to ranching practices at the site. Ranch complexes typically include a ranch headquarters or main ranch house, housing for ranch hands, corrals, shade trees, a repair shop, and storage buildings or structures for other ranch materials (fence wire, posts, hay, and horses). Carson and Eagle Valley ranches differed from Starr's typical features by rarely including windmills or water towers due to the availability of water from the Carson River, and the abundance of larger barns to store winter hay. However, secondary and tertiary facilities and their relationship to primary ranching headquarters remained consistent with Starr's synthesis. Resources like line camps, waterholes distant from the main complex, loading chutes, and holding corrals are just as critical in conveying the significance of these ranches to the upper Carson

[128] Starrs, *Let the Cowboy Ride,* 11-12, 15; Marshall, 18.

River's agricultural landscape since the mid-nineteenth century. However, as primary ranch complexes are most likely to be retained, it is important to note their secondary and landscape features that help convey significance, such as bunkhouses, main yards, tree-lined approach roads, nearby fields, a blacksmith or trading shop, and a ceremonial entry.[129]

The character-defining features of a ranch complex center around the components necessary for success in Nevada's environment, which is largely arid with a short growing season and limited water from snowmelt. As such, most ranch complexes will have access to an irrigation network of some kind, that draws water from a central river, creek, or irrigation canal and distributes it into pasture or crop fields. The vast majority of crop fields are hay of various mixtures, either for pasture or for winter feed crops that will be stored in the primary barn. The corrals were used to pen animals, from the ubiquitous beef cattle and sheep, to work horses and oxen, the latter of which were popular work animals in Carson Valley through the nineteenth century. Fenced fields with hay or pasture crops would be quite common. While alfalfa (*Medicago sativa*) remained the dominant feed crop for livestock throughout much of Nevada's history into the present, it was almost always mixed with a variation of introduced varieties such as timothy (*Phleum pratense*), red top (*Agrostis gigantea*), and red clover (*Trifolium pratense*), and native grasses dominated by Basin wildrye (*Leymus cinereus*).[130]

Ranch complexes in Carson Valley will almost invariably have a Barn and/or a Ranch House as an element within them, anchoring the spatial distribution of the complex. Exceptions to this are generally found on ranches that were primarily used for sheep or poultry raising in Carson Valley, where Poultry Houses or Loafing Sheds take the place of the larger barn. Details of both the Barn and Ranch House property types are outlined separately below, but they can also be contributing buildings to any Ranch Complex, if they have clear association to the property and integrity to the period of significance. There may be cases where a smaller or peripheral Ranch Complex, such as a field camp or corral that is some distance from a main ranch headquarters, may be eligible without the presence of either a Barn or a Ranch House, but these resources were not observed during the reconnaissance survey. Most Ranch Complexes, in addition to the Barn and Ranch House, will include all or some of the following resources that should be evaluated to determine their contributing status. Generally, these resources will not be individually eligible unless the building, structure, site, or object represents a singular link to a particular, significant, agricultural property, or is the last remaining resource of a significant ranching property. Examples of each resource type are provided below:

[section continues]

[129] Paul F. Starrs, "An Inescapable Range, or the Ranch as Everywhere," in *Western Places, American Myths: How We Think About the West*, by Gary J. Hausladen, ed., (Reno & Las Vegas: University of Nevada Press, 2003), 74; Starrs, *Let the Cowboy Ride*, 12-13.
[130] Dangberg, *Carson Valley*, 73; Dressler, 38.

Barn – Among the most dominant of agricultural buildings, Barns will frequently be contributing buildings in a larger Ranch Complex. More detail is provided below in a separate property type.

The barn (left) and accompanying equipment shed (center) at the Oscar T. Van Sickle/Pope Valley Ranch north of Mottsville Nevada SHPO, July 7, 2016.

The Miller/Scossa Barn along Foothill Road south of Sheridan. Nevada SHPO, July 7, 2016.

Bunk House – Most larger ranch complexes relied on seasonal, and sometimes year-round, labor and provided some form of workers' housing for these ranch hands, as is the case for company-level operations such as the Dressler Ranch, and the several Dangberg ranches in Carson Valley. Workers' housing tended to be more subdued and smaller in size than the primary Ranch House, but was often designed to blend with the larger complex, as is seen in the Bunkhouse at the Dangberg Home Ranch, and the architecturally-unified red brick housing at the Dangberg Sheep Ranch north of Minden. If present, possessing clear association to the property's significance, and retaining integrity to the period of significance, Bunk Houses should be included in a Ranch Complex historic district as contributing buildings.[131]

Bunk House at the Dangberg Home Ranch. Nevada SHPO, July 22, 2016.

[131] National Register of Historic Places, "Home Ranch," Minden, Douglas County, Nevada, NRIS# 80002466, Sec. 7, p2.

Cattle/Horse/Loafing Shed – As opposed to Sheds, below, Loafing Sheds are designed for use as outdoor shelter for livestock, especially sheep, and frequently have one elevation open to allow for livestock access. They tend to be opened south for sun exposure, but not always. If part of a dairy operation, a milking parlor will be near the loafing shed. It might also be near the feed area for the livestock, which tends to be paved and sloped for easier cleaning. If present, possessing clear association to the property's significance, and retaining integrity to the period of significance, Cattle/Horse/Loafing Sheds should be included in a Ranch Complex historic district as contributing structures.[132]


Loafing Shed at the Louis & Esther Stodieck Ranch near Waterloo. Nevada SHPO, June 7, 2016.

Fencing, Corralling, Loading/Squeeze Chutes – Most ranch complexes will include a significant amount of fencing, corralling, and chutes to create controlled pathways for livestock. Fencing is generally used to demarcate open pasture and divide different sets or types of livestock, as well as to divide livestock from fallow pasture or fields for crops such as wheat, barley, alfalfa, or potatoes. Fences are usually made with simple wood posts, either of scrap timber or squared posts, with wire in-between that is frequently, though not always, barbed to discourage cattle from pressing against it. Corralling is typically constructed near a barn or loafing shed and is used for more intensive work with livestock, such as breaking horses, branding livestock, or preparing cattle for market. Loading or squeeze chutes are usually attached to a corral space and used for loading livestock into wagons or trucks for transport to the market or slaughterhouse. Both of these are typically made from finished boards and squared posts, with sturdier construction due to the likelihood of livestock pressing or bumping against it. If present, possessing clear association to the property's significance, and retaining integrity to the period of significance, Fencing, Corralling, and Loading/Squeeze Chutes should be included in a Ranch Complex historic district as contributing elements. For particularly noteworthy features such as an important fence line, counting them as a contributing structure may be appropriate. For features that are contributing to the overall site of a ranch, the overall ranch grounds or important landscapes within the ranch should be counted as a contributing site, and these circulation and control features included as Historic Associated Features.[133]

[132] South Dakota State Historical Society (SDSHS), *Homesteading and Agricultural Development Context*, by Allyson Brooks and Steph Jacon, (Vermillion, South Dakota: 1994), 54.
[133] SDSHS, 62.

Granary/Corncrib – Granaries in Carson and Eagle Valleys are somewhat variable, and were used as small grain storage structures to hold various grains including corn. Most nineteenth century granaries are small, frame structures with shed or gable roofs, built on small masonry piers. They may often be buildings modified for use as a granary, especially those not on a raised foundation, and so care should be taken to examine the building's interior for significant modifications hinting at grain storage. On larger ranches, Barns were frequently modified to accommodate grain storage instead of having a stand-alone granary. During the twentieth century, farmers either replaced or added to their granaries with circular or oblong galvanized steel structures with conical roofs and ventilators. If present, possessing clear association to the property's significance, and retaining integrity to the period of significance, a Granary should be included in a Ranch Complex historic district as a contributing structure.[134]

Orchard – Orchards were relatively common on early Carson and Eagle Valley ranches as a source of produce for the farmers and ranchers themselves. However, few have survived due to economic changes and reductions in water availability. Even as early as the late-nineteenth century, orchard production throughout most of the country was commercial, making small family farms increasingly uncommon. The Homestead Act, and the lingering subsidy of small family farms at this time, meant the proliferation of small family orchards on most farms and small ranches at the encouragement of the General Land Office.

Orchards may be sited on irrigable soils or in cleared areas, and may not be planted in association with any irrigation source, or consideration for layout or spacing. As a one-time planting venture, orchards provided an easy way to "prove up" under the Homestead Act, usually bearing fruit within five years. Not only providing food to the ranching or farming family, orchards in Carson and Eagle Valley provided easily marketable produce to travelers on the roads to California or in nearby mining communities. However, after 1880, easy railroad transportation and increasingly national markets required areas to specialize, and most of Carson and Eagle Valley's growing energies turned to dairying, beef cattle, wool growing, and hay production. Aside from small family orchards, most orchards were no longer maintained. However, H.F. Dangberg ran a rather large commercial orchard on his property along the East Fork of the Carson River.[135]

As a result, most surviving orchards in Carson and Eagle Valleys will likely not be eligible for listing as individual resources, but will be contributing elements to Ranch Complexes. If present, possessing clear association to the property's significance, and retaining integrity to the period of significance, Orchards should be included in a Ranch Complex historic district as a contributing site, or, if relatively small and possessing only a handful of trees, as an Historic Associated Feature within the Ranch Complex's grounds. Survey revealed only two surviving orchards in the research area, one at the Ash Canyon Ranch in west Carson City, now owned by the Joost Land & Livestock Company, and one at the Adams Ranch north of Genoa. However, further intensive survey of ranches in the study area may reveal small surviving orchards in Carson and Eagle Valleys.[136]

[134] Ohio Historic Preservation Office, *How to Complete the Ohio Historic Inventory* by Stephen C. Gordon, (Columbus: Ohio Historical Society, 1992), 152; Cranston, 75.
[135] Susan A. Dolan, *Fruitful Legacy: A Historic Context of Orchards in the United States, with Technical Information for Registering Orchards in the National Register of Historic Places*, (Washington, D.C.: National Park Service, 2009), 60, 63; Dressler, 43.
[136] Dolan, 150.

Pastures and Fields – Pastures and fields are a critical component of historic ranch complexes, where livestock are put out to feed, or where hay crops are irrigated and grown for winter feed. Carson and Eagle valley ranches would have sustained a variety of crops, from the ubiquitous alfalfa to timothy, red top, and red clover, but most hayfields tended to still include native grasses, dominated by Basin Wildrye (*Leymus cinereus*). With alfalfa stands generally exhausting themselves after 8 years of growth, other grains such as wheat, barley, and oats became important rotation crops to keep nutritious feed available for livestock. If present, possessing clear association to the property's significance, and retaining integrity to the period of significance, Pastures and Fields should be included in a Ranch Complex historic district as a single contributing site unless the separate features are each significant enough to be counted individually. Associated fences, minor irrigation ditches, roads, and other features associated specifically with Pastures and Fields can be included as Historic Associated Features to the contributing site.[137]

Louis & Elmer Stodieck Ranch, fields to the west of the complex. Nevada SHPO, June 7, 2016.

[137] Dressler, 42-43.

Poultry House or Chicken Coop – This is usually a single-story, shed-roof frame structure with vertical board wall surfaces, such as board-and-batten. Chicken coops often face south and will have several windows and doors on the south elevation to allow for good lighting and ventilation. Because Poultry Houses tend to be built from salvaged materials, or are salvaged structures themselves, it is likely that these structures will have been moved at least once as part of their use. This generally will not render a Poultry House non-contributing, especially if the relocation occurred before or during the period of significance for the Ranch Complex. A Poultry House that has been relocated within the Ranch Complex after the period of significance may still be contributing if its significance, historic use, and association to the property can be adequately conveyed. If present, possessing clear association to the property's significance, and retaining integrity to the period of significance, Poultry Houses or Chicken Coops should be included in a Ranch Complex historic district as contributing structures.[138]

William Lampe Poultry House (center). Nevada SHPO, December 22, 2016.

[138] Ohio HPO, 153.

Privy – Usually one of the smallest buildings in a ranch or farm complex, the privy or outhouse was a necessary part of any residence prior to the advent of plumbing. Most were narrow, single room, rectangular frame structures with a gable or shed roof and vertical board walls, but masonry is present although rare. If present, possessing clear association to the property's significance, and retaining integrity to the period of significance, Privies should be included in a Ranch Complex historic district as contributing structures.[139]

Privy at the William Lampe Ranch, constructed by the Works Progress Administration. Nevada SHPO, December 22, 2016.

[139] Ohio HPO, 156.

Ranch House – Another dominant building in most Ranch Complexes, a Ranch House will often be a potential contributing building to a Ranch Complex, if it possesses sufficient integrity. Ranch Houses were generally the headquarters and primary residence for any ranch operation, and the hub of social and family life on the ranch. As Ranch Houses may be individually significant as well, more detail is provided below in a separate property type.

Peter Van Sickle Ranch House north of Mottsville. Nevada SHPO, November 24, 2015.

Roads or Road System – Most Ranch Complexes will include roads to facilitate the transportation of people and goods to and from the complex, and the movement of equipment around the field and pasture system. Most will be unpaved, and may simply be ad-hoc paths worn down over decades of use rather than formal roads. If present, possessing clear association to the property's significance, and retaining integrity to the period of significance, a system of Roads should be included in a Ranch Complex historic district as a single contributing structure. However, if a specific road possesses unique importance, it may be called out separately as a single structure. Integrity for these linear features will generally be adequate if the historic road-bed materials (dirt, gravel, asphalt, etc.) are present, and the road's width and route are mostly intact.

Root Cellar – Constructed into a hillside or excavated ground, a root cellar was constructed to provide a cool dark environment for storage of fruits, root crops, and vegetables. It is usually a small gable-roofed structure atop a stone or concrete foundation, but size, shape, and configuration vary widely depending on the farm operation. If present, possessing clear association to the property's significance, and retaining integrity to the period of significance, Root Cellars should be included in a Ranch Complex historic district as contributing structures.[140]

[140] Ohio HPO, 156.

Secondary Irrigation Features – Primary irrigation features such as reservoirs, canals, and main ditches typically were typically owned jointly by ranchers via incorporated water companies. Primary features are considered separately below. However, once primary water conveyances reached a particular rancher's property, he or she would usually access it by constructing laterals and minor ditches to distribute the water throughout the property. With flood irrigation being fairly common in alfalfa production, most laterals and minor ditches will follow the upland side of fields, with headgates spaced regularly to allow water to flow over a field's gentle grade. By the twentieth century, most farmers had plowed and leveled their fields to facilitate this flood irrigation process, contributing to the relatively flat valley floor seen today. Spent water at the lower side of the field was usually channeled into an outgoing ditch that would dump extra water back into the main conveyance for use downstream. If present, possessing clear association to the property's significance, and retaining integrity to the period of significance, Secondary Irrigation Features can be included in a Ranch Complex historic district as a single network, counted as one contributing structure. However, if a particular lateral possesses unique significance, it may be counted individually as a separate structure from the rest of the irrigation network on the property.

A diversion box and culvert (left) and distribution ditch (right) on the Stodieck ranches near Waterloo. Nevada SHPO, June 7, 2016.

Sheds – Every Ranch Complex will likely have one or more Sheds of varying size. Among the most easily missed but most dynamic of ranching structures, Sheds are typically used for equipment storage, and are usually small, one-room structures housing smaller equipment such as tack, blacksmithing equipment and a forge, or other items. They will be flat, shed, or gable roofed and may be sited near a larger building or structure, serving a secondary purpose to their neighboring resources. They may be wood, usually board-and-batten, or corrugated metal. If present and possessing integrity, Sheds will be contributing structures to a Ranch Complex (please also see *Loafing Sheds*).

A collection of sheds on the Settelmeyer Ranch along the south side of Genoa Lane east of Genoa and west of US 395. Nevada SHPO, July 22, 2016.

Silo – Extremely rare in Carson and Eagle Valleys, silos were constructed for storing green fodder or ensilage. Their circular shape allowed for the reduction of spoilage in the corners of the structure. Often built next to the main barn, a silo is a common part of any ranch that depends on the provision of grain feed to sustain its livestock. The common use of hay, alfalfa, and open pasturage meant that silos were relatively uncommon in Eagle and Carson Valleys, although a small number do exist, including on the former Settelmeyer Ranch on Genoa Lane east of Genoa. If present, possessing clear association to the property's significance, and retaining integrity to the period of significance, Silos should be included in a Ranch Complex historic district as contributing structures.[141]

Silos on the Frank Settelmeyer Ranch along Genoa Lane. Nevada SHPO, July 22, 2016.

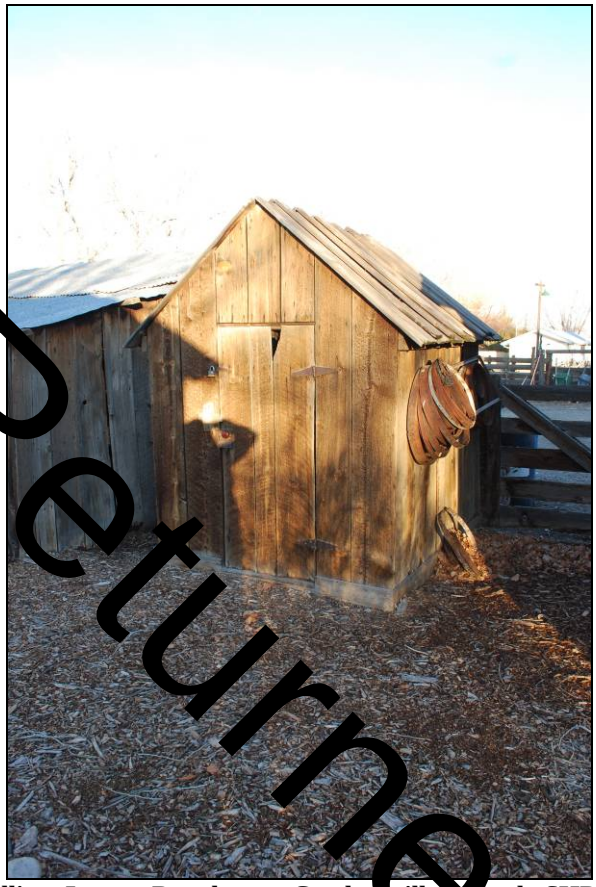
[141] Ohio HPO, 157.

Slaughterhouse/Butcher Shop – Slaughterhouses on individual Ranch Complexes were used by ranchers to slaughter beef for local consumption, and thus, are not as common outside the larger ranches of Carson and Eagle Valleys. Slaughterhouses will generally be smaller structures, around one-and-one-half story to accommodate a winch-wheel to hoist animal carcasses off the floor for cutting. They will usually have board-and-batten siding and may be on a raised foundation to accommodate blood flow out of the building. Due to the small percentage of beef stock slaughtered on the farms in this area, many slaughterhouses might serve a dual purpose, including a grain or hay loft storage above the slaughtering floor.[142]

Slaughterhouse at the Dangberg Home Ranch. Built between 1915 and 1916, this was possibly the largest such facility in the region. The roof was damaged prior to 1980 but has not been repaired, leading to the current deterioration. Nevada SHPO, July 22, 2016.

[142] Vanita Renee Cranston, "Vernacular Ranch Architecture: An Ethnohistorical Study," Master's Thesis, University of Nevada, Reno, 1991, 73.

Smokehouse – Although not common in Carson Valley, some larger ranches may have a smokehouse. This would be a small, one-story rectangular masonry structure with a gable roof. It will usually be devoid of wall openings other than the door and small air vents. These generally became obsolete during the twentieth century with the advent of improved refrigeration and custom packing. If present, possessing clear association to the property's significance, and retaining integrity to the period of significance, Smokehouses should be included in a Ranch Complex historic district as contributing structures.[143]



Smokehouse at the William Lampe Ranch near Gardnerville. Nevada SHPO, December 22, 2016.

Springhouse – Also somewhat rare in Carson Valley, some ranches may have a springhouse. If a spring is present on the ranch property, a farmer might construct a small structure over the spring to limit vegetation and livestock damage to the water source. These are usually built of brick or local stone, are boxy and simple, and have a shed or gable roof and a small door for access. If present, possessing clear association to the property's significance, and retaining integrity to the period of significance, Springhouses should be included in a Ranch Complex historic district as contributing buildings.[144]

[143] Ohio HPO, 154.
[144] Ohio HPO, 154.

Summer Kitchen or Kitchen House – Larger ranches will have summer kitchens to keep the heat of cooking away from the primary residence in hot summer days. Significantly larger ranches might also have a separate kitchen to provide meal service to ranch hands. A kitchen house will be a one- or two-story, rectangular frame building near the main farmhouse or bunkhouse. For most smaller ranches, a summer kitchen fell out of fashion as a result of electricity, refrigeration, and improved climate control in homes. If present, possessing clear association to the property's significance, and retaining integrity to the period of significance, Summer Kitchens or Kitchen Houses should be included in a Ranch Complex historic district as contributing buildings.[145]

Kitchen House and Stone Cellar west of the main house, Dangberg Home Ranch, south of Minden. Nevada SHPO, July 22, 2016.

[145] Ohio HPO, 155.

Registration Requirements

In general, Ranch Complexes that demonstrate clear association and integrity to the agricultural development of Carson and/or Eagle Valleys will be eligible under Criterion A in the area of *Agriculture*. The Complex must have been used as a farm, ranch, orchard or other agricultural operation during the period outlined above in Section E. All resources with a strong association to agriculture along the upper Carson River in Carson and Eagle Valleys will be eligible under Criterion A if they retain sufficient integrity. A Ranch Complex significant under Criterion B must demonstrate significance to an important person's life or career as outlined above, and retain strong integrity to the period during which that property contributed to that individual's historic importance. The Dangberg Home Ranch southwest of Minden is a strong example of a ranching property that has been listed in the National Register under Criterion B. Under Criterion C, a Ranch Complex will be eligible in the area of *Architecture* if its collective contributing resources reflect a particularly important or well-preserved example of a ranching operation in Carson or Eagle Valleys. In this event, comparison to other ranching complexes in the area must be completed to demonstrate that the property in question is a uniquely well-preserved example. Ranch Complexes can also be significant under Criterion C in the area of *Community Planning and Development* if they reflect the master planning envisioned by a major ranch owner or livestock company in which the Ranch Complex served not only as a site of agricultural development, but also provided worker housing for individuals and/or families, recreational facilities, family gardening space, etc. The Buckeye Ranch and Sheep Ranch, both north of Minden-Gardnerville and constructed by the Dangberg Land and Livestock Company, are excellent examples of Ranch Complexes that may have significance under Criteria A and C in the area of *Community Planning and Development*.

Historic integrity in the context of a Ranch Complex involves a connection between multiple aspects of a property's physical features. To retain integrity, a Ranch Complex should have strong integrity in location, setting, feeling, association, and design. Materials and workmanship are also important, but will have more importance for properties significant under Criteria B, C, or D. The recommended application of the seven aspects of integrity to a Ranch Complex, based on the four Criteria, is outlined below:

1. Location - Original location is critical in the context of agriculture, since the historic use and function of farms and ranches is indelibly connected to the landscape in which the buildings, structures, and other features of a ranch were developed. In general, a Ranch Complex must possess integrity of location to be eligible under any Criteria. Smaller agricultural buildings or structures that contribute to the significance of a Ranch Complex may still retain integrity of location if they have been moved within the confines of the complex of which they were/are a part. If all or a portion of a Ranch Complex are moved from their original location, they will generally not be eligible for the National Register as they have particular difficulty meeting Criteria Consideration B for moved properties.

2. Design – Under Criterion A, a Ranch Complex will have integrity of design if its overall functional features that existed and served those functions during their historic period are retained in their historic form, plan, and general style. It is expected that resources will have changed over time as they continued to contribute to the agricultural development of Carson and Eagle Valleys. Non-historic additions or modifications to contributing properties may not render a resource non-contributing, or the entire Ranch Complex ineligible, if the character-defining historic elements of design are still present and easily recognized. Such important characteristics in a Ranch Complex might include the spatial organization of a complex, the presence of corral, fence, and irrigation features in their historic configuration, and ranch houses, barns, and secondary structures retaining their historic form and massing.

   To be eligible under Criterion B, a Ranch Complex must retain all the attributes listed above, and must reflect the design as present during the period of significance for the property associated with the significant individual in question. Contributing resources should not have been moved since the end of the period of significance, and non-historic modifications to the scale, primary massing, and defining design features of key resources should not be present or should be minimal. These additional integrity

requirements also apply to Ranch Complexes significant under Criterion C under *Architecture* or *Community Planning and Development*, and under Criterion D.

3. Workmanship – For a Ranch Complex significant under any Criteria, integrity of workmanship among the buildings is less important than integrity of the overall landscape, but a district will generally have integrity if a majority of its resources, or at least its key resources such as the Ranch House, Barn, and key sites or landscape areas such as a farmyard, orchard, or corral (if present), show the basic elements of the historic craftsmanship or labor that built them and modified them over time. This might include mortise-and-tenon joinery in the barn, milled lumber on a Ranch House, but also additions and alterations reflecting "ad-hoc" changes by the ranch owner during the period of significance, such as upgrading a barbed wire fence with juniper posts to one with metal posts in the 1940s, upgrading a wooden irrigation flume to concrete, or shifting a field historically seeded for pasturage and plowing it for fruit produce. Integrity of workmanship in this case is defined by the historic and present use of the Complex more than the architectural integrity of buildings and landscapes in most cases. Alterations to individual resources within a Ranch Complex that affect integrity of workmanship may render that resource non-contributing to the district. For example, a c.1910 wooden barn with mortise-and-tenon joinery and wood siding would no longer contribute to the Ranch Complex if the wood siding were removed and replaced with steel after the period of significance, or if the mortise-and-tenon frame was removed and replaced with steel bracing after the period of significance.

4. Materials – Integrity of materials in a Ranch Complex is defined in *National Register Bulletin 30* as the physical "construction materials of buildings, outbuildings, roadways, fences, and other structures," as well as the makeup of vegetation on the ranch complex during its operation. For a Ranch Complex nominated under Criterion A, strict integrity of materials is less important than integrity of overall design. Changes and upgrades that are typically necessary for the continuing function of farms and ranches often involve changes to materials, such as the addition of steel siding to a ranch house, or the cutting of trees in windbreaks. It is common for farmers or ranchers to replace plantings, both large and small, with new varieties more suited to the local climate, and this can occur without severely diminishing integrity of materials. These are all acceptable changes to materials under Criterion A. Integrity of materials becomes more important for properties nominated under Criteria B, C, or D, especially concerning the built resources of a Ranch Complex. Although alterations to vegetation and landscape areas are expected, the materials used to construct or modify buildings or structures during the period of significance should be retained. For example, a property such as the Buckeye Ranch developed by the Dangbergs should retain the defining unpainted, red brick exterior walls, white wood trim details, and corrugated steel roofing that are important features in defining the planned vision of the complex as constructed by the Dangberg Land & Livestock Company.[146]

5. Setting - Setting is a critical component of any agricultural resource, especially a Ranch Complex. In most cases, as long as the environment surrounding a ranch property is generally still rural/agricultural in nature and reflects its historic period, that property will have integrity of setting. Setting may be negatively impacted by encroachment from residential and commercial development, especially in farms and ranches in and around Minden, Gardnerville, and Carson City. Some degree of loss of integrity in setting is acceptable, as long as the feeling and association with agriculture within the period of significance is retained. A property will have integrity of setting if its overall landscape and surroundings still generally reflect its period of significance.

6. Association - While integrity of feeling and association are more intangible and difficult to measure, they are generally present when other areas of integrity are high, and pertain to the ability of a visitor to

[146] U.S. Department of the Interior, National Park Service, *National Register Bulletin 30: Guidelines for Evaluating and Documenting Rural Historic Landscapes*, (Washington, D.C., rev. 1999), https://www.nps.gov/nr/publications/bulletins/nrb30/nrb30_8.htm, accessed December 8, 2016.

a particular agricultural property being able to recognize the historical associations of the property with its agricultural past. The majority of surviving agricultural resources in Carson Valley are still used for agricultural purposes, although this is not the case in Eagle Valley. While continued agricultural use is not necessary for a property to retain integrity of association, it can be a strong contributor. Generally, a Ranch Complex will possess integrity of association if its overall landscape still reflects its history of agricultural production.

7. Feeling – Much like integrity of association, integrity of feeling is difficult to measure, but will generally be present when integrity in the other five aspects are high. To possess integrity of feeling, a Ranch Complex should retain the overall sense of an agricultural landscape. Integrity of feeling may be high for active ranches that still run similar livestock as were present in the ranch's historic period, or grow similar crops such as alfalfa or hay as were present in the ranch's historic period.

Surveyed Ranches in Carson and Eagle Valleys

During this project, Nevada SHPO staff surveyed 95 Ranch Complexes and other agriculturally-related resources, most of which were Ranch Complexes. A full list of surveyed Ranch Complexes is below. Although efforts were made to make this list exhaustive, there is a likelihood that a small number of properties were missed in the survey effort. The list is nonetheless a valuable overview of the Ranch Complexes in Carson and Eagle Valleys.

Surveyed Ranch Complexes (Alphabetical by Area/Community, then Current Name)				
Historic Name	Current Name	Date Established[147]	Address	Area/Community
Buckeye Ranch (Dangberg)	Bently Ranch	1920	1745 Buckeye Road	Buckeye
Roubahn Ranch	Andersen Ranch	1862	1800 Kings Canyon Road	Carson City
Roubahn/Robinson Ranch	Bell Ranch	1862	2100 Kings Canyon	Carson City
Gilson Ranch	Joost Land & Cattle Co. Ranch	1866	2240 Ash Canyon Road	Carson City
Meyers Ranch	Lompa Ranch	1862	2300 E. Fifth Street	Carson City
Anderson, Charles, Ranch	Anderson Family Ranch	1913	685 Centerville Lane	Centerville
Behrman Ranch	Haase Ranch	1900	1350 Dressler Lane Road	Centerville
Cordes Ranch	Cordes Ranch	1900	1055 NV Hwy 88	Centerville
Curry Ranch	Schwake Ranch	1862	W of NV Hwy 88 at Kimmerling Road	Centerville
Friche Ranch	Fricke Ranch	1900	1255 Centerville Lane	Centerville
Helwinkel, John, Ranch	Sierra Vista Holsteins	1913	1128 Centerville Lane	Centerville
Helwinkel, John, Ranch	Sierra Vista Holsteins	1910	1182 Centerville Lane	Centerville
Pedrojetta Ranch	Kleiner Ranch	1913	917 NV Hwy 88	Centerville
Squires Ranch	Rahbeck Ranch	1862	694 NV Hwy 88	Centerville
Stodieck, J.H.,	Cereghino Ranch	1913	1282 Centerville Lane	Centerville

[147] The year established has been estimated based on the County Assessor information, taken into consideration with available primary and secondary literature and survey observations where available and where time allowed. The proliferation of 1913 and 1862 as establishment years hinges upon in-depth documentation completed by the USGS in 1862 as well as by State Engineer Richard Allen in 1913. This date should not be considered confirmed in all cases, but considered a helpful starting point for in-depth research on each property, if warranted. In many cases, the date has been interpolated from historic survey and topographic maps, stating the earliest confirmed date of the ranch being present in the record.

Ranch / Di Salvo Ranch				
Thran Ranch	Sinnott Ranch	1913	876 Centerville Lane	Centerville
Tiedge Ranch	Lawrence Ranch	1913	1200 Lawrence Lane	Centerville
White Ranch	White Ranch	1913	1201 Waterloo Lane	Centerville
Jacobsen Ranch	Peri Ranch	1901	1608 Pinenut Court	Dresslerville
Park Ranch	Corley Ranch	1911	859 N. US Hwy 395	Dresslerville
Gilliland Ranch	Settelmeyer Ranch	1867	750 N. US Hwy 395	Dresslerville
Twelve Mile House	Twelve Mile House	1855	950 N. US Hwy 395	Dresslerville
Cary Ranch	Groenendyke Ranch	1862	551 Foothill Road	Fairview
Cary Ranch	Jackson Ranch	1862	575 Jackson Ranch Road	Fairview
Luther/Heitman Ranch	Brooks Ranch	1862	445 Foothill Road	Fairview
Olds Ranch	Ahern Ranch	1862	397 Foothill Road	Fairview
Wyatt Ranch	Holden Ranch	1862	501 Foothill Road	Fairview
Marsh Ranch	Martin Ranch	1879	901 Dressler Lane	Fredericksburg
Marsh Ranch	Alley Ranch	1879	401 NV Hwy 88	Fredericksburg
Frantsen, H., Ranch	Jacobsen Ranch	1913	1525 Toler Lane	Gardnerville
Lampe, H.C., Ranch	Park Ranch	1913	1424 Toler Lane	Gardnerville
Lampe, William Ranch	Jacobs Bern Farm	1887	1335 Centerville Lane	Gardnerville
Scheckte Ranch	Hussman Land & Livestock Ranch	1862	1250 N. US Hwy 395	Gardnerville
Adams Ranch	Adams Ranch	1862	2575 Jacks Valley Road	Genoa
Cook Ranch	Dascoli Ranch	1913	2855 Jacks Valley Road	Genoa
Lyon Ranch	Trimmer Ranch/ Ranch No. 1	1864	231 Genoa Lane	Genoa
Schacht Ranch	Galeppi Ranch	1890	2301 Galeppi Lane	Genoa
Settelmeyer Ranch	Settelmeyer Ranch	1913	3388 N. US Hwy 395	Genoa
Settelmeyer, F., Ranch / Boyd Ranch	Settelmeyer Ranch	1862	409 Genoa Lane	Genoa
Wright Ranch	Williams Ranch	1862	2242 Main Street	Genoa
Wright Ranch	Cochran Ranch	1870	2335 Main Street	Genoa
Johnson, A., Ranch	BIA Ranch	1862	Jacks Valley Road	Jack's Valley
Snyder, J., Ranch	Schneider Ranch	1862	300 Jacks Valley Ranch Road	Jack's Valley
Winters Ranch	Ascuaga Ranch	1855	150 Jacks Valley Ranch Road	Jack's Valley
Bartels, Herman, Ranch	Gunderson Ranch	1913	2572 Heybourne Road	Johnson Lane
Godecke, C.W. Ranch	Bently Complex	1913	2298 Heybourne Road	Johnson Lane
Johnson, Hans, Ranch	Siteview Ranch	1913	900 Johnson Lane	Johnson Lane
Schacht, Arthur, Ranch	Waldrep Ranch	1913	961 Airport Road	Johnson Lane
Thran, William, Ranch	Borcher & Cross Ranches	1913	933 Michael Lane	Johnson Lane
Thran, William,	Midkiff Ranch	1913	929 Michael Lane	Johnson Lane

Ranch				
Uhart-Wennhold Ranches	Uhart Ranch	1913	2360-2400 Heybourne Road	Johnson Lane
Neil and Gray Ranch	Fagen Ranch	1866	West Kings Canyon Road	Kings Canyon
Stevens and Schwies Ranch	Old Woods Ranch	1866	West Kings Canyon Road	Kings Canyon
Dressler Ranch / Irving Ranch	Dressler Ranch	1860	1039-1045 Dressler Lane	Long Valley
Dressler, William, Ranch (owned only)	Bently Ranch	1913 (buildings likely 1965)	650 Anderson Ranch Road	Long Valley
Heidtman, Karl, Ranch	Long Valley Ranch	1862	1467 Indian Creek Road	Long Valley
Jones, D.L., and Ellen Lloyd Ranch	Thunderbird Ranch	1913	641 NV Hwy 88	Long Valley
Salge Ranch	Thunderbird Ranch	1862	575 NV Hwy 88	Long Valley
Taylor Ranch	Kawcak Ranch	1913	580 NV Hwy 88	Long Valley
Dangberg Home Ranch	Dangberg Home Ranch	1862	1450 NV Hwy 88	Minden
Dangberg Sheep Ranch	Bently Ranch	1913	1089 Stockyard Road	Minden
Dreyer Ranch	Dreyer 395 Ranch	1913	1761 N. US Hwy 395	Minden
Klauber Ranch	Park Ranch	1857	798 Tamarack Drive	Minden
Springmeyer Land & Livestock Co.	Mack Land & Cattle Co. Ranch	1901	1580 7th Street	Minden
Allerman, Fred & Laura, Ranch	Morgan Ranch	1913	1461 Foothill Road	Mottsville
Bartels, Ernest, Ranch	Prescott-Erwin Ranch	1913	1978 Foothill Road	Mottsville
Cary Ranch	Foothills Ranch	1862	1135 Foothill Road	Mottsville
Christianson-Fiel Ranch	Hone Ranch	1913	690 Mottsville Lane	Mottsville
Godecke, Henry, Ranch	Hone Ranch	1913	698 Mottsville Lane	Mottsville
Hansen Ranch	Wiley Ranch	1913	220 Hansen Lane	Mottsville
Heise Ranch	Heise Ranch	1913	1250 NV Hwy 88	Mottsville
Howard Ranch	Dreyer Foothill Ranch	1862	1051 Foothill Road	Mottsville
Johnson, Chris, Ranch	Bonafede-Scossa Ranch	1913	570 Mottsville Lane	Mottsville
Park, David, Ranch	Springmeyer Ranch	1864	575 Mottsville Lane	Mottsville
Lange Ranch	Herbig Ranch	1913	480 Muller Lane	Mottsville
Muller, William, Ranch	Muller Ranch	1913	400 Muller Lane	Mottsville
Rabe, Willie, Ranch	Willow Stay Ranch II	1913	671 Mottsville Lane	Mottsville
Van Sickle Station	Wyatt, Ranch, Teig Ranch	1855	1974 Foothill Road	Mottsville
Van Sickle, Oscar T., Ranch	Pope Valley Ranch	1913	1675 Foothill Road	Mottsville
	Guaglianone Ranch		5010 Hells Bells Road	New Empire

Bird-Ulrich Ranch	Silver Saddle Ranch – White Complex	1945	4901 Carson River Road	New Empire
Chartz-Herlax Ranch	Silver Saddle Ranch – Red Complex	1935	4901 Carson River Road	New Empire
Haskell Ranch	Bell Ranch	1862	5000 Hells Bells Road	New Empire
Barber Ranch	Scott Ranch	1860	416 Cuttin-Loose Lane	Sheridan
Helwinkel, John, Ranch	Sheridan Creek Equestrian Center	1913	551 Centerville Lane	Sheridan
Miller Ranch	Scossa Ranch	1862	676 Foothill Road	Sheridan
Murphy Ranch	Young Ranch	1862	975 Sheridan Lane	Sheridan
Palmer Ranch	Colyer Ranch	1860	775 Foothill Road	Sheridan
F.W. Stodieck Ranch	Stodieck Ranch (1868)	1868	1367 Wilhelm Place	Waterloo
Henningsen Brothers Ranch	Gansberg Ranch	1913	1037 Waterloo Lane	Waterloo
Henningsen Brothers Ranch	Frensdorff Ranch	1913	1012 Waterloo Lane	Waterloo
Hussman, William, Ranch	Crouch Ranch	1900	1095 Waterloo Lane	Waterloo
Lightle Ranch	Stodieck Ranch (1904)	1860	1350 Wilhelm Place	Waterloo
Louis Stodieck	Caruana Ranch	1913	851 Mottsville Lane	Waterloo

Associated Property Type: Ranch House

A Ranch House typically served as the primary residence for a particular ranching family as they established and grew their agricultural operation. Ranch Houses not only served as a private residence for the family that owned the ranch, but frequently became the business office for the ranch operations as well. Often second only to the barn, Ranch Houses signify one of the most significant investments of a ranch family's effort in building and maintaining the ranch, and tended to be the most architecturally articulate. The construction of Ranch Houses throughout the historic period in Carson and Eagle Valleys transitioned along with the popular styles of the time and the availability of materials. Earlier homes were mostly sod or log cabins designed to simply "prove up" on a land claim without much thought to a long-term residence. Many of these earliest ranching homes were demolished quickly in favor of larger Ranch Houses. They followed what has been termed "National Folk" forms and were frequently vernacular in nature, having very little in the way of architectural styling, but revealing much about the building traditions and available materials along the upper Carson River in the mid-19th century.

Most Ranch Houses will follow popular stylistic trends depending on when they were constructed. Architecturally, those Ranch Houses present in Carson and Eagle Valleys are generally represented by the Mid-19th Century, the Late Victorian period, the Late 19th & 20th Century Revivals, and the Late 19th and Early 20th Century American movements, with the Victorian period dominating. Redevelopment on many ranches in the valley has meant that ranchers demolished many historic ranch houses between the 1960s and the present to make way for newer houses from the Modern or post-Modern movements. Indicative of the rolling establishment of ranches from the 1850s into the 1920s, the historic housing styles and types generally correspond with the stylistic period during which Ranch Houses were built. Many of the earliest ranches possess main houses styled after Romantic period forms, such as Greek or Gothic Revival. Of the 86 Ranch Houses observed as part of this study, six were Greek Revival and eight were Gothic Revival, or approximately 16.3% of the historic Ranch Houses. Moving into the Victorian era, styles and types of this variety are more common, with 23 Folk Victorian homes of some variety observed. Another seven had no expressed style, but were classifications of house types common to the Victorian era, totaling 34.9%. In addition, two Craftsman-style dwellings, and one Dutch Colonial Revival were observed. Revealing the proclivity of ranch owners to modernize their ranch complexes, 19 of the observed Ranch Houses in the study are were either Ranch or

Minimal Traditional residences, or 22.1% of homes. Another 19 could not be observed from the public right-of-way, and will need surveyed with permission from the owner before a classification can be made. This is in part because many ranch owners kept their residences well-shielded from wind and weather by the judicious use of ornamental trees, including cottonwoods (*Populus* sp.), elms (*Ulmus* sp.), and mixtures of conifers. Nearly every ranch house and its ancillary structures are shaded by at least a dozen such trees, if not more, providing clear indicators on the broad, open landscape of where farm and ranch complexes are located.

However, the architectural trends in the valley appear to be tightly linked to the ethnic influx of non-native settlers to the area beginning in the 1850s. The earliest permanent dwellings constructed under the governance of the Church of Jesus Christ of Latter Day Saints (LDS) were Greek Revival. Most of the LDS Church's earliest settlements tended to favor Greek Revival styling in both homes and public buildings, with the style becoming endemic of Utah's early settlement architecture. The use of subdued versions of the Greek Revival style in residences such as at Van Sickle Station reflect this trend. Greek Revival buildings in the study area tend to be one-story or one-and-half story residences with a large footprint and a low-pitched roof that is typically front-gabled without forming a clean temple front. Although frame buildings are most common, such as the Dangberg Home Ranch residence, some are stone such as the Van Sickle Station residence. They tend to have multi-light fenestration throughout the building, Classical columns or pilasters incorporated into exterior features, and a single, prominent gable end dominating the façade. Although not strictly symmetrical, they do incorporate symmetrical elements including balanced bays and gable ends.[148]

Although the Gothic Revival style was popular at the same time and a prolific early style in the northwest Nevada region, its use appears to have lingered somewhat, remaining popular long after it had become effectively antiquated in the rest of the United States. The motivation for this extended use of Gothic Revival into the 1890s is not clear. Gothic Revival architecture originated in the 1850s and was generally out of style by the 1870s. For example, the Gothic Revival Wilhelm Lampe residence in Gardnerville was constructed in 1898, two decades after the use of the style had diminished elsewhere in the country. Although a second revival of Gothic architecture occurred in the early-twentieth century throughout the United States, this second wave tended to focus on public and religious buildings, such as university campuses, rather than on residential architecture. Of the eight Gothic Revival residences observed in the study area, four are Asymmetrical, three are the Paired Gable variety, and only one, the home at the Martin Ranch in Fredericksburg, is a Paired Gable type. Gothic Revival residences in the area are exclusively frame buildings with lapboard siding. Some are subdued examples with little styling and few or no vergeboards such as the Lampe residence. Others, such as the Springmeyer Ranch near Mottsville, are well-articulated with vergeboards and pointed arch windows.[149]

[148] Thomas Carter and Peter Goss, *Utah's Historic Architecture, 1847-1940: A Guide*, (Salt Lake City: Utah State Historical Society, 1988), 99.
[149] Virginia McAlester, *A Field Guide to American Houses*, 2nd ed., (New York: Alfred A. Knopf, 2013), 266-280; New Mexico Department of Cultural Affairs, Historic Preservation Division, *Architectural Classification: Style and Type*, November 2013, 50, http://www.nmhistoricpreservation.org/assets/files/arms/HCPIArchitecturalStyles20131115.pdf, accessed February 28, 2017.

Gothic Revival-style Wilhelm Lampe Ranch House southeast Gardnerville. Nevada SHPO, December 22, 2016.

The Victorian Era dwellings are the most diverse in format although they too are dominated by the Folk Victorian style. Several incline toward the Queen Anne style, specifically the Free Classic Front Gabled variety, but lack sufficient detailing to classify them as such. It is rare to find decorative spindlework on the farm houses in Carson and Eagle Valleys, although their counterparts in nearby Genoa and Carson City frequently possess them. Many of the residences with no style, but with recognizable types such as the Pyramidal Box, reflect certain Victorian features, such as the central block with projecting bays. Many of the Folk Victorian homes follow this pattern, having enough recognizably Victorian patterning to be classified as such. Modest spindlework and lathe-turned porch posts are frequently giveaways. Many of these Folk Victorian examples demand further study in order to classify each residence by type rather than simply style. One of the more popular varieties of the Folk Victorian are single-story, side-gabled residences that appear to be among the earlier homes in the valley. Some include long, full-width porches on their facades with simple squared posts, suggesting their construction earlier in the settlement of the valley. Perhaps most unique among the Ranch Houses of the study area is a residence on the former Johnson Ranch now part of Washoe tribal lands. The house here is eclectic, with allusions to late-Victorian style with its massing, its multiple, moderately-pitched gables, and its use of ornamental concrete block on its exterior walls. However, its overall symmetry and the jerkin-head roof form on the gable ends makes the building difficult to classify, although its outer wall material suggests an early-twentieth century construction when use of ornamental concrete block was at its peak.[150]

[150] McAlester, 396-405; National Register of Historic Places, *Ornamental Concrete Block Buildings in Colorado, 1900 to 1940*, Colorado, 1997, http://www.historycolorado.org/sites/default/files/files/OAHP/crforms_edumat/pdfs/626.pdf, accessed February 28, 2017.


A standard Side-Gabled hall-parlor ranch house on the Muller Ranch (left) and the Johnson Ranch/BIA ranch house along Jack's Valley Road (right). Nevada SHPO, July 7, 2016.

Colonial Revival and Craftsman residences indicative of the 1910s and 1920s are extremely rare, suggesting that most successful ranchers had established themselves and constructed their homes prior to that time. Research thus far supports this generalization. The single Dutch Colonial Revival example is at the former Hansen Ranch in Mottsville, with a gambrel roof with intersecting gables and shingle siding. Although William Hansen, who owned and developed the ranch, was an American from California born in approximately 1880, his father was Danish, perhaps providing an influence on the choice of style. The two Craftsman-style dwellings are on the former Park (Dresslerville) and Bartels (Mottsville) ranches. The Park residence southeast of Gardnerville is a large, side-gabled dwelling with copious multi-light windows, and decorative brackets, as well as a prominent, centered gable dormer on the front with similar detailing and exposed rafter tails. The Bartels residence is much more subdued, being a simple, single-story, side-gabled dwelling with an intersecting front-gable housing a walled-in porch, all with exposed rafter tails and six-over-one wood sash windows.[151]

[151] Nevada Historical Census, "William M. Hansen," 1910 Census, University of Nevada, Reno, https://library.unr.edu/census, accessed February 27, 2017

Craftsman-style bungalow at the Park/Corley Ranch near Fresslerville. Nevada SHPO, July 7, 2016.

Signaling the replacement of many ranch houses with newer accommodations following the Second World War, the proliferation of mid-century Modern styles and types is common. Minimal Traditional-type homes on ranches tend to be smaller buildings with almost no detailing, reminiscent of simpler Folk Victorian buildings, these residences frequently have broader lapboard or masonite siding, simple one-over-one wood sash or aluminum frame windows. Ranch-type houses are more articulated, with Colonial styling such as a low-pitched roof, decorative shutters, and usually a gable-ell or simple side gable plan. Most are fairly simple articulations of their house types, with very little, if any decoration. The single exception to this among newer homes on historic ranches is the Contemporary-style dwelling on the White Ranch near Centerville. Emulating the Rustic Contemporary so common in the Lake Tahoe Basin, the large, irregularly-massed residence includes heavy timber framing, several interlocking gable-roofed blocks, shingle covering on some features such as chimneys, and a dominating two-story, low-pitch gable entry facing east, with glass curtain walls.

Registration Requirements

Most Ranch Houses in Carson and Eagle Valleys will be the anchor for a Ranch Complex and will be potentially contributing to an historic district if they have sufficient integrity. However, Ranch Houses may also be eligible individually, especially in cases where they are individually significant, or when other aspects of a particular ranching operation no longer possess integrity and the Ranch House stands as the only intact example. This may be the case with former ranching properties near both Minden-Gardnerville and Carson City where the land for a ranch operation has been sold and re-developed but the Ranch House remains. The Empire Ranch House in Carson City at 4681 Morgan Mill Road is an example where the main Ranch House remains and has good historic integrity, but the vast majority of outbuildings and ranch land were redeveloped in the late-1990s to create the Empire Ranch Estates subdivision and Empire Ranch Golf Course.

To be contributing to a Ranch Complex, a Ranch House should demonstrate association to the overall importance of the ranch, and possess good integrity to the period of significance. To be individually-eligible, a Ranch House must demonstrate *individual* significance. Individual significance for a Ranch House under Criterion A or B will be rare as that association is usually carried by the full Ranch Complex rather than its individual pieces and parts. An exception to this might be a case where the other elements of the Ranch Complex have been demolished, and the Ranch House is the only remaining resource associated with an important ranch, making the house individually eligible. In most cases, if a Ranch House possesses individual significance, it will be under Criterion C in the area of Architecture for displaying a unique or significant example of a type, style, or method of home construction in ranch environments in the study area. For example, the Knox-Springmeyer House near Mottsville may be eligible as a prominent and perhaps the best-articulated example of Gothic Revival architecture for a Ranch Complex in Carson Valley. Ranch Houses may also be eligible under Criterion D for their potential to contribute information about the future study of vernacular architecture and construction methods in Carson and Eagle Valleys. In order to be eligible under Criterion D, specific research questions that address broad issues of vernacular architecture must be established, along with the clear ability of the property to address those research questions. To be eligible individually, Ranch Houses should possess strong integrity in all seven aspects including location, setting, feeling, and association, but especially of design, materials, and workmanship.

Observed Ranch Houses (alphabetical, by House Style/Type then Area/Community)				
Historic Name	Current Name	Date Ranch Established[152]	House Style and/or Type[153]	Area/Community
White Ranch	White Ranch	1913	Contemporary	Centerville
Park Ranch	Corley Ranch	1911	Craftsman	Dresslerville
Bartels, Ernest, Ranch	Prescott-Erwin Ranch	1913	Craftsman	Mottsville
Hansen Ranch	Wiley Ranch	1913	Dutch Colonial Revival	Mottsville
Johnson, A., Ranch	BIA Ranch	1920 (circa)	Eclectic	Jack's Valley
Roubahn Ranch	Andersen Ranch	1862	Folk Victorian	Carson City
Roubahn/Robinson	Bell Ranch	1862	Folk Victorian	Carson City

[152] The year constructed has been estimated based on the County Assessor information, taken into consideration with available primary and secondary literature and survey observations where available and where time allowed. The proliferation of 1913 and 1862 as establishment/construction years hinges upon in-depth documentation completed by the USGS in 1862 as well as by State Engineer Richard Allen in 1913. This date should not be considered confirmed in all cases, but considered a helpful starting point for in-depth research on each property, if warranted. In many cases, the date has been interpolated from historic survey and topographic maps, stating the earliest confirmed date of the ranch being present in the record. It has been used to date a ranch house only where the record and the typology of the house correspond.

[153] "Not observed" refers to those properties where the presence of a primary Ranch House could be confirmed via aerial imagery, but access or landscape prohibited a clear view of the building in order to classify it. Intensive survey may add or modify the terms in this column.

Ranch				
Cordes Ranch	Cordes Ranch	1900	Folk Victorian	Centerville
Friche Ranch	Fricke Ranch	1900	Folk Victorian	Centerville
Heckathorne Ranch House	Jesser Ranch House	1865	Folk Victorian	Centerville
Jetter Ranch House	Dunagan Ranch House	1865	Folk Victorian	Centerville
Stodieck, J.H., Ranch / Di Salvo Ranch	Cereghino Ranch	1913	Folk Victorian	Centerville
Thran Ranch	Sinnott Ranch	1913	Folk Victorian	Centerville
White Ranch	White Ranch	1913	Folk Victorian	Centerville
Jacobsen Ranch	Peri Ranch	1901	Folk Victorian	Dresslerville
Twelve Mile House	Twelve Mile House	1855	Folk Victorian	Dresslerville
Lampe, H.C., Ranch	Park Ranch	1913	Folk Victorian	Gardnerville
Scheckte Ranch	Hussman Land & Livestock Ranch	1862	Folk Victorian	Gardnerville
Lyon Ranch	Trimmer Ranch/ Ranch No. 1	1864	Folk Victorian	Genoa
Settelmeyer, F., Ranch / Boyd Ranch	Settelmeyer Ranch	1862	Folk Victorian	Genoa
Uhart-Wennhold Ranches	Uhart Ranch	1913	Folk Victorian	Johnson Lane
Dressler Ranch / Irving Ranch	Dressler Ranch	1869	Folk Victorian	Long Valley
Dangberg Sheep Ranch	Bently Ranch	1913	Folk Victorian	Minden
Dreyer Ranch	Dreyer 395 Ranch	1913	Folk Victorian	Minden
Springmeyer Land & Livestock Co.	Mack Land & Cattle Co. Ranch	1901	Folk Victorian	Minden
Christianson-Fiel Ranch	Hone Ranch	1913	Folk Victorian	Mottsville
Lightle Ranch	Stodieck Ranch (1904)	1860	Folk Victorian	Waterloo
Muller, William, Ranch	Muller Ranch	1913	Gable Front and Wing	Mottsville
Rabe, Willie, Ranch	Willow Stay Ranch II	1913	Gable Front and Wing	Mottsville
Gilliland Ranch	Settelmeyer Ranch	1867	Gothic Revival	Dresslerville
Cary Ranch	Jackson Ranch	1862	Gothic Revival	Fairview
Marsh Ranch	Martin Ranch	1879	Gothic Revival	Fredericksburg
Lampe, William Ranch	Jacobs Berry Farm	1887	Gothic Revival	Gardnerville
Wright Ranch	Williams Ranch	1862	Gothic Revival	Genoa
Heidtman, Karl, Ranch	Long Valley Ranch	1862	Gothic Revival	Long Valley
Park, David, Ranch	Springmeyer Ranch	1864	Gothic Revival	Mottsville
F.W. Stodieck Ranch	Stodieck Ranch (1868)	1874	Gothic Revival	Waterloo

Squires Ranch	Rahbeck Ranch	1862	Greek Revival	Centerville
Dangberg Home Ranch	Dangberg Home Ranch	1900	Greek Revival	Minden
Cary Ranch	Foothills Ranch	1862	Greek Revival	Mottsville
Van Sickle Station	Wyatt, Ranch; Teig Ranch	1855	Greek Revival	Mottsville
Henningsen Brothers Ranch	Gansberg Ranch	1913	Greek Revival	Waterloo
Hussman, William, Ranch	Crouch Ranch	1900	Greek Revival	Waterloo
Curry Ranch	Schwake Ranch	1862	I-House	Centerville
Chartz-Herlax Ranch	Silver Saddle Ranch – Red Complex	1935	Massed Plan Side Gabled	New Empire
Meyers Ranch	Lompa Ranch	1862	Minimal Traditional	Carson City
Anderson, Charles, Ranch	Anderson Family Ranch	1913	Minimal Traditional	Centerville
Thran Ranch	Sinnott Ranch	1913	Minimal Traditional	Centerville
Schacht, Arthur, Ranch	Waldren Ranch	1913	Minimal Traditional	Johnson Lane
Lange Ranch	Herbig Ranch	1913	Minimal Traditional	Mottsville
	Guaglianone Ranch		Minimal Traditional	New Empire
Bird-Ulrich Ranch	Silver Saddle Ranch – White Complex	1945	Minimal Traditional	New Empire
Haskell Ranch	Bell Ranch	1862	Minimal Traditional	New Empire
Gilson Ranch	Joost Land & Cattle Co. Ranch	1866	Not observed	Carson City
Behrman Ranch	Haase Ranch	1900	Not observed	Centerville
Adams Ranch	Adams Ranch	1852	Not observed	Genoa
Cook Ranch	Dascoli Ranch	1913	Not observed	Genoa
Schacht Ranch	Galeppi Ranch	1890	Not observed	Genoa
Settelmeyer Ranch	Settelmeyer Ranch	1913	Not observed	Genoa
Wright Ranch	Cochran Ranch	1870	Not observed	Genoa
Snyder, J., Ranch	Schneider Ranch	1862	Not observed	Jack's Valley
Winters Ranch	Ascuaga Ranch	1855	Not observed	Jack's Valley
Thran, William, Ranch	Midkiff Ranch	1913	Not observed	Johnson Lane
Neil and Gray Ranch	Fagen Ranch	1866	Not observed	Kings Canyon
Stevens and Schwies Ranch	Old Woods Ranch	1866	Not observed	Kings Canyon
Dressler, William, Ranch (owned only)	Bently Ranch	1913 (buildings likely 1965)	Not observed	Long Valley
Jones, D.L., and Ellen Lloyd Ranch	Thunderbird Ranch	1913	Not observed	Long Valley
Salge Ranch	Thunderbird Ranch	1862	Not observed	Long Valley
Taylor Ranch	Kawcak Ranch	1913	Not observed	Long Valley
Klauber Ranch	Park Ranch	1857	Not observed	Minden
Miller Ranch	Scossa Ranch	1862	Not observed	Sheridan
Henningsen Brothers Ranch	Frensdorff Ranch	1913	Not observed	Waterloo

Johnson, Chris, Ranch	Bonafede-Scossa Ranch	1913	Pyramidal Box	Mottsville
Helwinkel, John, Ranch	Sierra Vista Holsteins	1910	Ranch	Centerville
Pedrojetta Ranch	Kleiner Ranch	1913	Ranch	Centerville
Tiedge Ranch	Lawrence Ranch	1913	Ranch	Centerville
Bartels, Herman, Ranch	Gunderson Ranch	1913	Ranch	Johnson Lane
Johnson, Hans, Ranch	Siteview Ranch	1913	Ranch	Johnson Lane
Thran, William, Ranch	Borcher & Cross Ranches	1913	Ranch	Johnson Lane
Uhart-Wennhold Ranches	Uhart Ranch	1913	Ranch	Johnson Lane
Godecke, Henry, Ranch	Hone Ranch	1913	Ranch	Mottsville
Godecke, Henry, Ranch	Hone Ranch	1913	Ranch	Mottsville
Heise Ranch	Heise Ranch	1913	Ranch	Mottsville
Howard Ranch	Dreyer Foothill Ranch	1862	Ranch	Mottsville
Van Sickle, Oscar T., Ranch	Pope Valley Ranch	1913	Temple Front	Mottsville
Louis Stodieck	Caruana Ranch	1913	Temple Front	Waterloo

Associated Property Type: Barn

Barns are central but flexible architectural features of a ranch landscape, capable of being used for storage, social gatherings, shelter, and other necessary activities common in an agricultural landscape. They were typically one of the most significant investments in cash and labor for farming and ranching families, competing only with the ranch house for its importance and centrality to ranching landscapes. Although historically, barns had been used as small granaries, storing hay and grain crops, barns in the western United States primarily sheltered livestock, especially high-value working animals such as horses, mules, and family dairy animals. Most features of the barn were intended to serve a purpose: windows to illuminate interior activities, paint on the exterior to preserve the wood against harsh weather, or a cupola or monitor on the roof ridge to ventilate hay and avoid mold. Most barns included a hayloft for storage of cut grass or alfalfa. Their main levels usually included corral space for working animals, such as horses, mules, and oxen. Lower levels, if present, would be used for precise work, such as blacksmithing and other equipment repair.[154]

Observed Barn Types

Based on observations made in June of 2016, and the context outlined earlier in this document regarding barn architecture, Barn types that can be registered have been categorized into types below. Due to the infusion of a variety of ethnic construction methods into single Barns, including English, German, and Dutch styling, ethnic associations have not been used as the primary classification for Barns under this MPDF. Furthermore, because of the variety of barns in the area, Paul Oatman's classification of these barns as "Nevada Barns," has not been used to allow for a more nuanced classification of observed types. Instead, primary architectural elements such as roofing and layout were used for the primary classification represented in the following types:

High Barn – Most endemic of the Carson and Eagle Valley ranching operations, these barns reflect a large, typically two-and-one-half story construction with a moderately to steeply pitched gable roof that extends down to the first floor level (6 to 10 feet above the floor sill). They can be front or side-gabled, with either one or two large entries for wagons, depending on their size. They have a large hay loft space for storing large volumes of hay for winter feed, and frequently have indoor corrals for high-value stock such as horses and dairy cattle on the first floor, allowing hay to be thrown down from the loft into the corral spaces. Most barns of this type do not have side aisles that appear from the exterior roofline although the interior first floor space is divided as such and often has secondary door openings on the first floor gable ends. Typical interior plans on the first floor have a central aisle for pulling in wagons and loading or unloading hay, with side aisles that are either open or divided with a wall for work space, corrals, or equipment storage. There may be additions onto the barn of varying sizes to accommodate new uses or equipment, or simply to expand storage space. The Wilhelm Lampe Barn in Gardnerville is an example of a High Barn with no side-aisles, but with an addition onto its rear elevation to accommodate grain storage bins, likely added in the 1930s or 1940s for expanded feed storage as the valley transitioned into predominantly beef cattle production.

[154] Paul F. Starrs, "The Barn Where it Belongs," in Stephen R. Davis, *Sagebrush Vernacular: Rural Architecture in Nevada*, (Reno: Nevada Humanities Committee, 2003), 22-23, 25; Paul Oatman, "Timber Frame Barns of Carson Valley," in Davis, *Sagebrush Vernacular*, 27; Dangberg, *Carson Valley*, 112; Chere Jiusto & Christine W. Brown, *Hand Raised: The Barns of Montana*, (Helena, Mont.: Montana Historical Society Press, 2011), 2, 7.

Scossa Barn along Foothill Road, an example of a High Barn. Nevada SHPO, July 7, 2016.

Heidtman Barn near Dresslerville, an example of a High Barn. Nevada SHPO, December 29, 2016.

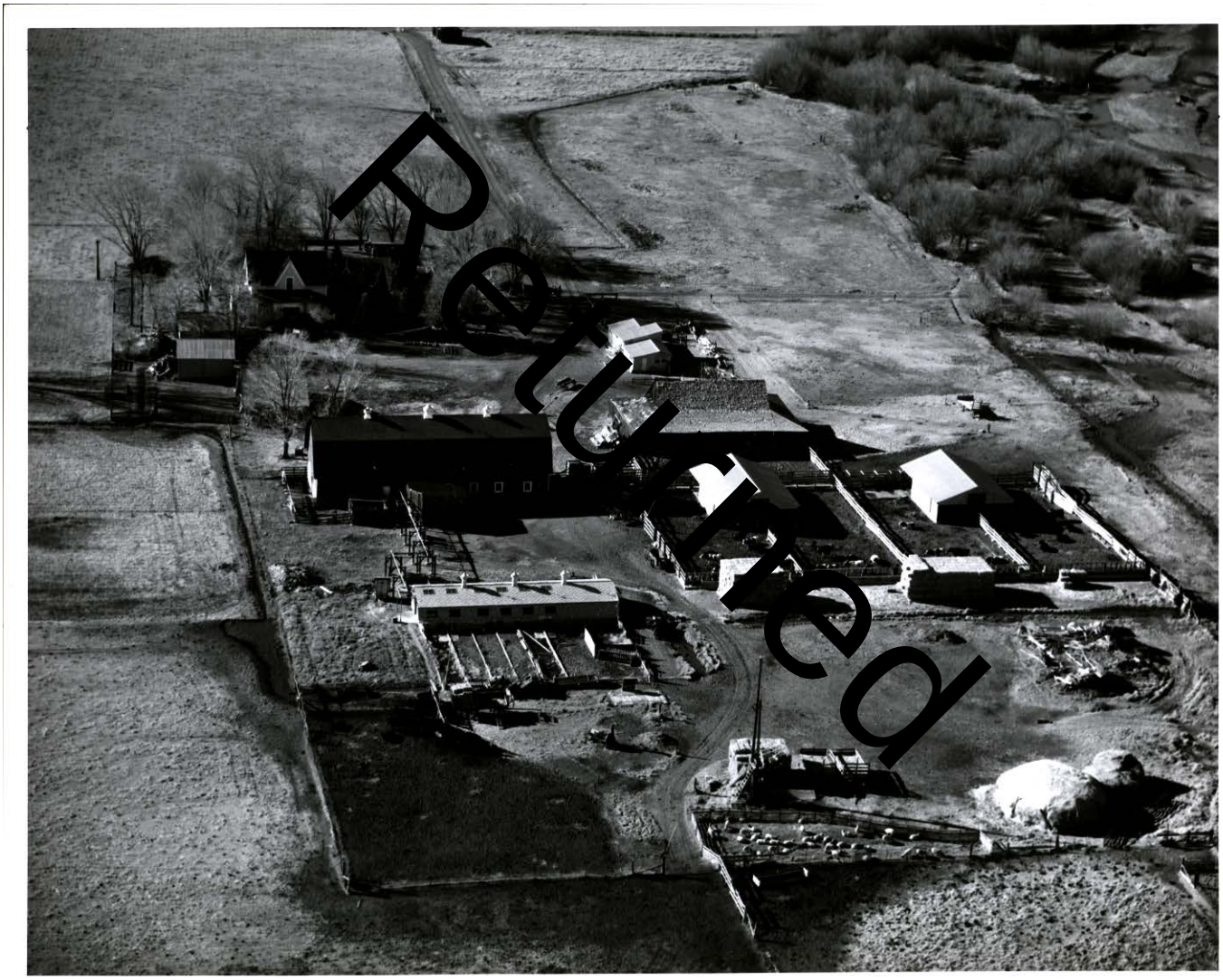
Low Barn with Side Aisles – Reflecting the smaller operations in the region, these small barns are generally a single story, but occasionally two, with a central aisle with gable roof creating a small hay loft above the center aisle. Side aisles for working space, corral space, or storage extend away from the central aisle, usually with shed roofs that create low-pitched flanks onto the central aisle. Ranchers likely constructed these primarily for horse stock, or for smaller farming and ranching operations. They also occasionally appear on ranches as secondary barns, where a larger, primary barn, usually a "High Barn," may exist. A smaller barn typically indicates less need to store hay, as well as less need for winter shelter for high-value stock such as dairy cattle or large horse teams. These smaller barns seem to indicate ranches established in the early-twentieth century. The reduced need for hay storage by this time may have been facilitated by the establishment of the town of Minden with a railroad terminus along the Virginia & Truckee Railroad, and the creation of a large hay storage warehouse near the depot there, allowing area ranchers to avoid the capital costs of large hay-storage barns.

Jacobsen-Peri Ranch barn, an example of a low barn with side aisles. Nevada SHPO, July 7, 2016.

Compact High Barn – This barn type, as the name implies, is a compact version of the high barn, with a relatively small footprint but high profile of about two-and-one-half stories. These barns are very rare in Carson and Eagle Valleys, with only 6 recorded as part of the survey effort. They are almost invariably front-gabled, with a hay fork apparatus on the façade, and a hay loft taking up most of the barn above the first floor. The moderately-pitched roof extends to the top of the second story, usually around 18 feet above the wall sill. The first floor is often divided into corral space for specific animals, such as a horse or mule team, and perhaps a small number of family milking cows. Room for wagons and equipment is also apparent in the floorplan, typically accessed by one or two sliding or swinging doors on the gable ends. The roof crest may or may not have a monitor for ventilation. They may also have experienced modifications to accommodate new equipment or use as a result of market and technology changes. For example, the Louis Stodieck Barn south of Minden had nearly its entire north elevation cut away to accommodate larger tractor equipment during the 1950s.

Compact High Barns on the Lompa Ranch in Carson City (left) and Louis Stodieck Ranch near Waterloo (right). Nevada SHPO, 2016.

Dairy Barn (F.W. Stodieck) – Among the larger and more ornate barns in American barn history are the Dairy Barns developed in the twentieth century. These dairy barns are defined by their large size, their gambrel, front-gabled roofs, and their use primarily as indoor shelter for dairying. They combined hay and dairy stock storage, largely influencing their size. Barns of this type will have clear distinction of space on the interior, generally being linear and abandoning the central and side-aisle configuration in favor of what agricultural scientists considered a more sanitary and efficient layout for dairy barns beginning in the late-nineteenth century. Barns will have stalls for feeding and milking with a small amount of corral space on their basement level, designed to allow for easy cleaning of refuse, old straw, and manure. The first floor will often be a combination of feed and equipment storage, with the upper floor still used as a hay loft. The storage pattern allowed for the continuance of the practice of dumping hay from the loft down into the feeding areas for cattle on the basement level. At the time of this nomination, the only known barn of this type in the study area is the F.W. Stodieck Dairy Barn south of Minden.



The Frederick W. Stodieck Ranch near Waterloo, 1946. Note the Dairy Barn near the center of the photograph, just below (east of) the Gothic Revival Ranch House. Courtesy of the Douglas County Historical Society.

German Barn – Although most of the barns in the study area display a fusion of various ethnic barn types, there is one example of a formal German Barn known at the time of this study; the Van Sickle Barn at Van Sickle Station. Minimal reconnaissance in Carson Valley in Alpine County, California, did not reveal any German Barns, but further survey there might reveal additional examples. As outlined above, traditional German barn-builders constructed their three-story barns into hillsides or into raised embankments to facilitate a careful division of space. The basement level, usually walled with stone, included corral and milking space for dairy stock, with at least one open side for access into an outdoor corral. They constructed the main floor at grade with reinforced timber and wood decking primarily for loading or unloading hay wagons, as well as storing equipment. Typically, the upper floor or floors would be simple, unattached wood decking that provided a hayloft, allowing for dumping the hay down onto wagons, or down two floors into the basement for feeding stock.

Surveyed Barns in Carson and Eagle Valleys

*Since specific research on each ranch was not conducted in most cases as a result of this project, and the known dates of construction for barns vary widely, no dates of construction have been included. Intensive survey documentation or nominations to the National Register of Historic Places will provide more in-depth information about each barn, including an estimated construction date.

Observed Barns (Alphabetical by Barn Type, then Area/Community)			
Historic Name	Current Name	Barn Type[155]	Area/Community
Roubahn/Robinson Ranch	Bell Ranch	Compact High Barn	Carson City
Meyers Ranch	Lompa Ranch	Compact High Barn	Carson City
White Ranch	White Ranch	Compact High Barn	Centerville
Gilliland Ranch	Settelmeyer Ranch	Compact High Barn	Dresslerville
Wright Ranch	Williams Ranch	Compact High Barn	Genoa
Lightle Ranch	Stodieck Ranch	Compact High Barn	Waterloo
F.W. Stodieck Ranch	Stodieck Ranch	Dairy Barn	Waterloo
Van Sickle Station	Wyatt, Ranch, Teig Ranch	German Barn	Mottsville
Meyers Ranch	Lompa Ranch	High Barn	Carson City
Stodieck, J.H., Ranch / Di Salvo Ranch	Cereghino Ranch	High Barn	Centerville
Friche Ranch	Fricke Ranch	High Barn	Centerville
Behrman Ranch	Haase Ranch	High Barn	Centerville
Pedrojetta Ranch	Kleiner Ranch	High Barn	Centerville
Tiedge Ranch	Lawrence Ranch	High Barn	Centerville
Squires Ranch	Rahbeck Ranch	High Barn	Centerville
Curry Ranch	Schwake Ranch	High Barn	Centerville
Helwinkel, John, Ranch	Sierra Vista Holsteins	High Barn	Centerville
White Ranch	White Ranch	High Barn	Centerville
Gilliland Ranch	Settelmeyer Ranch	High Barn	Dresslerville
Olds Ranch	Ahern Ranch	High Barn	Fairview

[155] In most cases, barns were classified by type according to direct field observations. However, because no ranches were accessed as part of the survey effort, all observations were made from the public right-of-way, making observation of some properties difficult. Therefore, classifications of barn types, although mostly accurate, may be subject to revision after intensive survey.

Observed Barns (alphabetical by Barn Type, then Area/Community)			
Historic Name	Current Name	Barn Type[155]	Area/Community
Luther/Heitman Ranch	Brooks Ranch	High Barn	Fairview
Marsh Ranch	Alley Ranch	High Barn	Fredericksburg
Marsh Ranch	Martin Ranch	High Barn	Fredericksburg
Lampe, William Ranch	Jacobs Berry Farm	High Barn	Gardnerville
Frantsen, H., Ranch	Jacobsen Ranch	High Barn	Gardnerville
Schacht Ranch	Galeppi Ranch	High Barn	Genoa
Schacht Ranch	Galeppi Ranch	High Barn	Genoa
Settelmeyer, F., Ranch / Boyd Ranch	Settelmeyer Ranch	High Barn	Genoa
Lyon Ranch	Trimmer Ranch/ Ranch No. 1	High Barn	Genoa
Winters Ranch	Ascuaga Ranch	High Barn	Jack's Valley
Winters Ranch	Ascuaga Ranch	High Barn	Jack's Valley
Winters Ranch	Ascuaga Ranch	High Barn	Jack's Valley
Snyder, J., Ranch	Schneider Ranch	High Barn	Jack's Valley
Snyder, J., Ranch	Schneider Ranch	High Barn	Jack's Valley
Snyder, J., Ranch	Schneider Ranch	High Barn	Jack's Valley
Godecke, C.W. Ranch	Bently Complex	High Barn	Johnson Lane
Dressler, William, Ranch (owned only)	Bently Ranch	High Barn	Long Valley
Dressler Ranch / Irving Ranch	Dressler Ranch	High Barn	Long Valley
Heidtman, Karl, Ranch	Long Valley Ranch	High Barn	Long Valley
Heidtman, Karl, Ranch	Long Valley Ranch	High Barn	Long Valley
Jones, D.L., and Ellen Lloyd Ranch	Thunderbird Ranch (North)	High Barn	Long Valley
Dangberg Home Ranch	Dangberg Home Ranch	High Barn	Minden
Dreyer Ranch	Dreyer 395 Ranch	High Barn	Minden
Springmeyer Land & Livestock Co.	Mack Land & Cattle Co. Ranch	High Barn	Minden
Klauber Ranch	Park Ranch	High Barn	Minden
Johnson, Chris, Ranch	Bonafede-Scossa Ranch	High Barn	Mottsville
Howard Ranch	Dreyer Foothill Ranch	High Barn	Mottsville
Cary Ranch	Foothills Ranch	High Barn	Mottsville
Lange Ranch	Herbig Ranch	High Barn	Mottsville
Godecke, Henry, Ranch	Hone Ranch (east)	High Barn	Mottsville
Godecke, Henry, Ranch	Hone Ranch (east)	High Barn	Mottsville

Observed Barns (alphabetical by Barn Type, then Area/Community)			
Historic Name	Current Name	Barn Type[155]	Area/Community
Christianson-Fiel Ranch	Hone Ranch (west)	High Barn	Mottsville
Rabe, Willie, Ranch	Willow Stay Ranch II	High Barn	Mottsville
Van Sickle, Oscar T., Ranch	Pope Valley Ranch	High Barn	Mottsville
Haskell Ranch	Bell Ranch	High Barn	New Empire
Miller Ranch	Scossa Ranch	High Barn	Sheridan
Barber Ranch	Scott Ranch	High Barn	Sheridan
Henningsen Brothers Ranch	Frensdorff Ranch	High Barn	Waterloo
F.W. Stodieck Ranch	Stodieck Ranch	High Barn	Waterloo
Anderson, Charles, Ranch	Anderson Family Ranch	High Barn (demolished)	Centerville
Cary Ranch	Groenendyke Ranch	High Barn (modified)	Fairview
Buckeye Ranch (Dangberg)	Bently Ranch	High Barn (red brick)	Buckeye
Roubahn/Robinson Ranch	Bell Ranch	Low Barn	Carson City
Adams Ranch	Adams Ranch	Low Barn w/ Side Ailes	Genoa
Gilson Ranch	Joost Land & Cattle Co. Ranch	Low Barn w/ Side Aisles	Carson City
Behrman Ranch	Haase Ranch	Low Barn w/ Side Aisles	Centerville
Park Ranch	Corley Ranch	Low Barn w/ Side Aisles	Dresslerville
Jacobsen Ranch	Peri Ranch	Low Barn w/ Side Aisles	Dresslerville
Cary Ranch	Groenendyke Ranch	Low Barn w/ Side Aisles	Fairview
Wyatt Ranch	Holden Ranch	Low Barn w/ Side Aisles	Fairview
Wyatt Ranch	Holden Ranch	Low Barn w/ Side Aisles	Fairview
Scheckte Ranch	Hussman Land & Livestock Ranch	Low Barn w/ Side Aisles	Gardnerville
Wright Ranch	Cochran Ranch	Low Barn w/ Side Aisles	Genoa
Johnson, A. Ranch	BIA Ranch	Low Barn w/ Side Aisles	Jack's Valley
Uhart-Wennhold Ranches	Uhart Ranch	Low Barn w/ Side Aisles	Johnson Lane
Stevens and Schwies Ranch	Old Woods Ranch	Low Barn w/ Side Aisles	Kings Canyon
Taylor Ranch	Kawcak Ranch	Low Barn w/ Side Aisles	Long Valley
Heise Ranch	Heise Ranch	Low Barn w/ Side Aisles	Mottsville
Hansen Ranch	Wiley Ranch	Low Barn w/ Side Aisles	Mottsville
Rabe, Willie, Ranch	Willow Stay Ranch II	Low Barn w/ Side Aisles	Mottsville
Palmer Ranch	Colyer Ranch	Low Barn w/ Side Aisles	Sheridan
Murphy Ranch	Young Ranch	Low Barn w/ Side Aisles	Sheridan

Registration Requirements

In general, Barns in Carson and Eagle Valleys will be potentially eligible for the National Register under Criteria A or B in the area of *Agriculture* as contributing resources in historic districts, listed as Ranch Complexes, which are outlined above. However, Barns that possess unique workmanship or design elements may be individually eligible under Criterion C in the area of *Architecture* if they possess strong integrity of workmanship, design, and materials. Barns may also be individually eligible under Criterion D if they have provided, or have the potential to yield, important information about the study of vernacular architecture related to agriculture in Carson and Eagle Valleys, such as the study of construction methods, classification of styles, or periodization of barn construction. To demonstrate significance under Criterion D, clear research questions and the expected data to be gathered from the Barn being nominated must be outlined for a Barn to be individually eligible under Criterion D. Barns represent one of the largest functional investments in a Ranch Complex, and although they are best evaluated as part of a larger Ranch Complex, they will occasionally have individual importance. The following registration requirements address Barns that are individually eligible, emphasizing their potential eligibility under Criteria C and D, in the area of *Architecture*.

Historic integrity for an individually significant Barn will need to be high, especially in the aspects of design, workmanship, and materials. The recommended application of the seven aspects of integrity to a Barn, based on the four Criteria, are outlined below:

1. Location - Original location for individually significant Barns will be most important in cases where the Barn is being nominated under Criteria A or B in the area of *Agriculture*. This may most often be the case when a Barn and immediately surrounding landscape is the last remaining resource representing a particularly significant ranching property. However, for Barns nominated under Criteria A or C in the area of *Architecture*, location is less important than integrity of design, workmanship, and materials, unless the Barn's historic location included site elements critical to its significance. For example, the Van Sickle Station Barn north of Mottsville is an early example of barn construction in Carson Valley, displaying a rare case of a traditional German Barn with three levels built into the hillside below the Sierra Nevada. In this case, although the barn possesses extraordinary significance in the area of *Architecture*, its removal to a new location would destroy the carefully designed relationship of the Barn to the terrain surrounding it. If a Barn has been moved from its original location, it will generally not be eligible for the National Register unless it can meet Criteria Consideration B for moved properties.

2. Design – Individually eligible barns must have strong integrity of design to be eligible under any Criteria. The overall framing system, sheathing, and roof structure are critical aspects of a Barn's character defining features, without which a Barn will be severed from its historic context. Most individually-eligible Barns under this MPDF will possess heavy timber framing, mortise-and-tenon joinery, and gable roofs of varying pitches. Lean-tos, added side-aisles, and corrugated tin or steel roofs may be significant additions and will likely contribute to a Barn's integrity of design. However, drastic modifications such as the removal of exterior sheathing, or removal of significant elements of the framing system will likely render a Barn ineligible for individual listing in the National Register. In that case, and depending on the degree of overall change, the Barn may still possess sufficient integrity to be contributing in a larger Ranch Complex.

3. Workmanship – For a Barn significant under any Criteria, integrity of workmanship is critical for individual eligibility for the National Register. This might include mortise-and-tenon joinery, saw-milled lumber, or hand-hewn framing elements, but also additions and alterations reflecting "ad-hoc" changes by the Barn owner during the period of significance. Historic modifications might include the partial cutaway of a side wall during the Barn's period of significance to accommodate large farm equipment, or addition of feeding cribs for a Barn where a rancher shifted the building's usage from hay storage to shelter for milking stock.

4. Materials – Integrity of materials for an individually-nominated Barn are equally critical as design and workmanship. The presence of pine or fir framing and sheathing will be most important. Frequently, between the 1920s and the 1940s, ranchers replaced wooden shingle or shake roofs with corrugated steel which may be significant in its own right and may not detract from integrity of materials. However, the replacement of timber framing systems with a steel beam system, the replacement of wooden sheathing with metal sheathing, or other major modifications to a Barn's character-defining materials will render an individual Barn ineligible for the National Register.

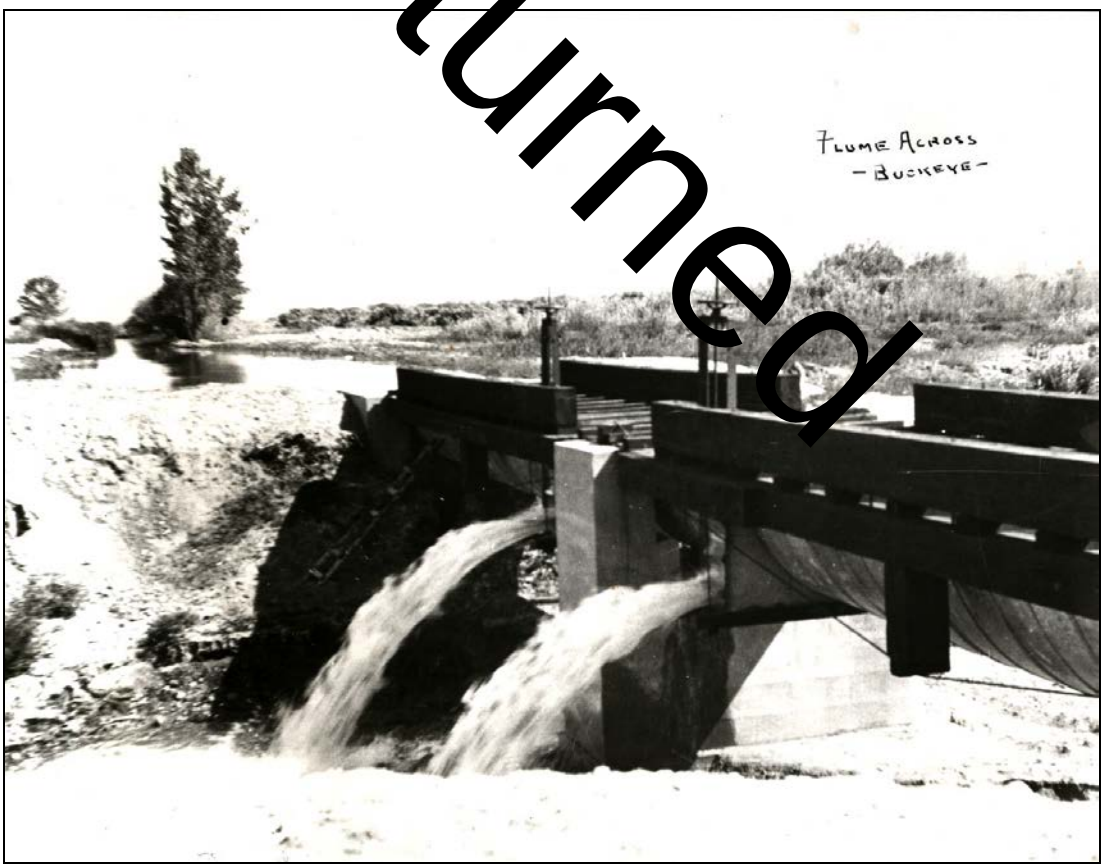
5. Setting - Setting can be an important component of an individual Barn, but may be less important than design, workmanship, and materials. A Barn that is significant under Criteria C or D in the area of *Architecture* will generally possess integrity of setting if it remains in an agricultural setting.

6. Association – Integrity of association for an individually nominated Barn will result from the presence of the collective materials, workmanship, and design that reflect the original builder's design and the purpose for which a Barn was built in its period of significance. For example, a dairy barn should still retain its milking room and feeding stalls to retain integrity of association.

7. Feeling – Much like integrity of association, integrity of feeling is difficult to measure, but will generally be present when integrity in the other six aspects are high. This aspect of integrity is less important than the other forms as nominated individually under Criterion C or D. Much like integrity of association, a Barn will possess integrity of feeling when its collective design, materials, and workmanship provide a sense of the historic use and function of the Barn during its period of significance.

Associated Property Type: Primary Irrigation Feature

As with all agriculture in the arid regions of the United States, irrigation is a critical element in sustaining farming and ranching operations. Some of the first developments in the valley following Euro-American settlement of the upper Carson River in the 1850s were the construction of irrigation ditches off of the Carson River and its tributaries. On the first map series for Carson Valley completed in 1862, ditches already appear near some of the earliest ranches to be established. Alongside formal irrigation ditches, common practice along the Carson River and its tributaries in these years was to cut the banks of the river and feeder creeks to spread the water flow and encourage more lush grass growth. Most of the valleys earliest ditches, many of which remain today, were first constructed between 1859 and the mid-1870s, including the Lightle (1860), Allerman (1861), Cottonwood Slough (1862), Boundary (1862), Brockliss No. 1 (1863), Old Virginia (1864), and New Virginia (1876). Many of these ditches were cooperative efforts, and although major ranchers such as the Dangbergs, Dresslers, and Settelmeyers may have controlled the largest interests in each, often several other ranchers with smaller operations would contribute to ditch construction in exchange for a portion of the water supply. As noted above, the construction of irrigation ditches accelerated during the Progressive Era, with new ditches being constructed, and many existing ditches being upgraded, extended, or re-routed. With the establishment of the U.S. Reclamation Service in 1902 and the development of the Truckee-Carson Irrigation Project (also known as the Newlands Project), the federal government moved to adjudicate water rights along the Carson River during the 1910s and 1920s, precipitating a legal battle between the Reclamation Service and the Alpine Land and Reservoir Company, which represented the irrigation interests of a significant percentage of Carson Valley ranchers. The case would not be concluded until 1980. The court proceedings inadvertently provided a wealth of documentation about Carson Valley's irrigation systems and their use between 1913 and 1930.[156]



Ditch flume over Buckeye Creek in Carson Valley. The flume allows appropriated water from the ditch to flow over the bed of Buckeye Creek, keeping the two waterways separate. This flume is likely for either the Allerman or Lower Old Virginia Canal. No date. Courtesy of Douglas County Historical Society.

[156] Achard and Buedel, 67 (initially published in the 1911 State of Nevada Biennial Report of the State Engineer).

By 1913, S.T. Harding, working on behalf of the federal government, had documented the network of irrigation ditches and their existing and recommended future water rights within Carson Valley. Harding recorded a total of 107 diversion ditches (not including pumps) pulling water off of the Carson River and its tributaries in both California and in Nevada above Empire. Of the 80 in Nevada, 78 were in Douglas County, and 2 were in Ormsby County (the Mexican and Lloyd Ditches). These ditches transported water to ranching properties, and allowed for access into the ranch's irrigation network via a headgate or diversion box. Once on a ranching property, a ranch owner might construct smaller ditches called laterals to distribute water throughout his or her field system, and to drain any excess water off the fields and back into the main ditch, stream, or river. Even smaller ditches called furrows would usually provide shallow channels through fields to ensure relatively even distribution of water through the field. Ranchers often spent the first few years of their operations steadily grading their acreage to level it and allow for even distribution of water throughout a field during flood irrigation in the spring.[157]

According to Harding's report, among the largest ditches in the two counties supplying the most acreage were (in order of construction):

Name of Ditch	Year Constructed	Acres (1913)
Henningsen Group	1852	1251
Park and Bull	1853	812
Dangberg Home Ranch Ditches	1858	2383
Dangberg System for Klauber and Mill Ranches	1858	1224
Jones-Tucke	1858	849
Boyd and Williams Slough	1859	1118
Dangberg System from Martin/Emigrant Sloughs	1860	2238
Mexican	1860	949
Allerman, Upper/Lower Virginia, Buckeye	1861	7099
Fredericksburg	1864	986
Dressler, Sheele, and Thran	1865	1050

Some ditches did not necessarily water a large amount of acreage, but did include a large number of users, each of whom retained a small interest in water rights for that ditch. Perhaps most indicative of this is the Ezell and McFanning Ditch with diverted water off the Cottonwood Slough, a secondary channel of the Carson River's east fork. Although the ditch only watered approximately 583 acres, dozens of Genoa and Genoa Minerville ranchers retained small interests in the structure and diverted water in several places along the ditch's length. In many cases, these irrigation systems are still in use, especially if the fields they supplied historically are still in use for agricultural purposes. Most are also still open-air ditches, although they serve dual purposes as irrigation supply for agricultural activity and as channels for flood diversion. However, in areas nearest post-1940 residential and commercial development, these ditches have either been enclosed and piped through the area below grade, or have been abandoned and demolished.

Registration Requirements

Irrigation features in the study area will generally be eligible for the National Register under Criterion A in the area of Agriculture. They will be significant primarily for their use as critical support systems for Carson and Eagle Valley's agricultural economy over the course of their operation from the 1850s into the present. To be eligible under this Criterion, integrity of location, design, workmanship, and association will be most important. Some irrigation features may be eligible under Criterion C in the area of Engineering for their reflection of important or innovative irrigation engineering in Carson or Eagle Valleys during the nineteenth and twentieth centuries. To be eligible under Criterion C, an irrigation ditch will need a high degree of integrity to its initial

[157] S.T. Harding, "Ditches and Irrigated Areas for Lands of Defendants in *United States v. Alpine Land and Reservoir Co.*, No. D-183, [1913], Subseries 8 (Maps), Robert A. Allen Papers, NC 97, UNR.

construction, as outlined below. Integrity of location, design, workmanship, materials, and association will be necessary for eligibility under Criterion C.

New Virginia Ditch remnant north of Toler Avenue, Nevada SHPO, July 7, 2016.

As linear features, irrigation channels present some challenges for their documentation and nomination to the National Register of Historic Places. In most cases, an irrigation ditch will be classified using NRHP property types as a structure, and should be treated as a single resource from its starting point (diversion off of a main water channel) to its terminus, either in a field or return into the main water channel. If being nominated to the National Register, the full length of the ditch must be documented. Evaluations for eligibility that may not result in a nomination should still consider the full length of a ditch from diversion to terminus as a single structure, but may document specific elements of the ditch recorded for that effort as "supporting" (i.e., retaining association and integrity to the ditch's historic period) or "non-supporting" (not retaining association and integrity to the ditch's historic period). Although these primary irrigation ditches connected to secondary features such as laterals and furrows on individual Ranch Complexes, in most cases, those secondary features should not be considered as part of the main ditch, and should be addressed as contributing structures or Historic Associated Features within the respective ranches for which they were built. For those lateral ditches that were built by the same company or cooperative organization that that constructed the main ditch, the lateral should be counted as a separate structure from the main canal or ditch. Although secondary laterals are common in western irrigation projects, especially large-scale undertakings such as the Truckee-Carson Irrigation Project, the use of laterals in Carson and Eagle Valleys appears to be mostly limited to individual ranchers who constructed them to transport water throughout their individual ranches.

The nomination of primary irrigation ditches as structures should include in their documentation the following elements:

- The ditch channel itself, and its embankments to retain water.
- Supporting channel features such as wooden box flumes that allowed for the ditch to travel over steep grades, railroads, roads, or other intervening features. These should be documented as Historic Associated Features.
- Headgates and diversion boxes used to control and divert water off of the main ditch onto specific ranching properties. If dating to the ditch's period of significance and retaining integrity, these elements should be documented as Historic Associated Features.

Because much of the study area remains predominantly agricultural, and these ditches are still in use, efforts to modernize and to increase water use efficiency may have been undertaken. In these cases, the boundary of a nominated ditch will still be the full length of the historic ditch and its right-of-way from its diversion from the stream or river to its terminus or outflow back into the stream or river. However, a nomination should document which segments of the ditch are "supporting" and which are "non-supporting." Common modifications that might render a ditch segment "non-supporting" include enclosure into a pipe (either exposed or buried), and replacement of features along a segment such as concrete and wood or metal diversion boxes and headgates with modern materials. The addition of a concrete trough under a historic ditch channel may not render a segment non-supporting if the new concrete lining retains the historic dimensions of the un-lined irrigation ditch. In cases where there has been significant and extended loss of integrity along a particular section of an irrigation feature, a discontiguous nomination of the single structure may be made. For example, if a 2-mile, open-air ditch remains largely intact, including its diversion dam, primary channel, and outflow, but a segment of ½ a mile has been enclosed and buried underneath intervening residential development, the ½ mile enclosed segment may be excluded from the nominated boundary, with the two segments above and below that area nominated as a single, albeit discontiguous, structure.

Aspects of historic integrity for a significant irrigation ditch are outlined below:

1. Location – Integrity of location for individually significant irrigation features is critically important for any ditch or canal. It should be expected that the original channel for an irrigation feature may have been moved, modified, or upgraded over time which, if those modifications occurred during the period of significance, will not have an adverse effect on integrity. If nominated under Criterion C, modifications to route will not have an adverse effect if those modifications are associated with the engineering significance of the feature.

2. Design – Irrigation features must have strong integrity of design to be eligible under any Criteria. Integrity of design will pertain to the overall channel depth, channel width, rhythm of turnouts or head-gates, and the diversion dam that funnels water into the channel. If the majority of these features are intact, an irrigation feature will have integrity of design.

3. Workmanship – Irrigation features should have good integrity of workmanship to be eligible under Criterion A. Prior to 1940, most irrigation features were constructed of soil using wagon teams with plowing sleds or by hand, with diversion boxes, flumes, and head-gates constructed of wood. Good integrity in this aspect includes these features generally being recognizable, although a lining of a channel with concrete, or the upgrading of existing diversion features with concrete rather than wood may be acceptable. To be eligible under Criterion C, integrity of workmanship should be strong, with the original workings still in place, including a predominantly soil channel with most original diversion features still present in their historic configuration.

4. Materials – Irrigation features should have good integrity of materials to be eligible under Criterion A, including raised soil embankments, and concrete or wood diversion features. Upgrades or modifications over time are expected as most existing irrigation channels in Carson and Eagle Valley are still in use for their historic purpose. In this case, upgrades of equipment such as diversion boxes and head-gates, or the addition of concrete lining to a ditch, may not adversely affect the integrity of the channel if integrity of location and design are strong. Under Criterion C, the irrigation feature should have strong integrity to its initial, or historically significant, period of construction or modification. Head-gates, channels, and diversion boxes should mostly retain their historic materials, including wooden gates and boxes, dirt-lined channels, and perhaps concrete features depending on the year of construction or modification.

5. Setting – To be eligible under any Criteria, an irrigation feature should have good integrity of setting. In general, as long as the majority of the irrigation channel remains in an agricultural setting, it will retain

integrity in this aspect. Segments of a channel that are surrounded by urban or suburban development may still be "supporting" if it has strong integrity in location, design, and materials.

6. Association – To be eligible under any Criteria, an irrigation feature should have strong integrity of association to its historic period as an agricultural support system. An irrigation feature will generally have strong integrity of association if it has strong integrity of location and design, and still provides water to most of the historic properties for which it was constructed historically.

7. Feeling – Integrity of feeling under any Criteria will be closely linked to the integrity of design, setting, and association. In general, an irrigation feature will retain integrity of feeling if the sum of its parts generally evokes the history of agriculture and irrigation development during the nineteenth and/or twentieth centuries.

Associated Property Type: Agricultural Industrial Building

Critical to the agricultural development of Carson and Eagle Valleys were industrial buildings to support the farming and ranching industry. These included mills, warehouses, and creameries.

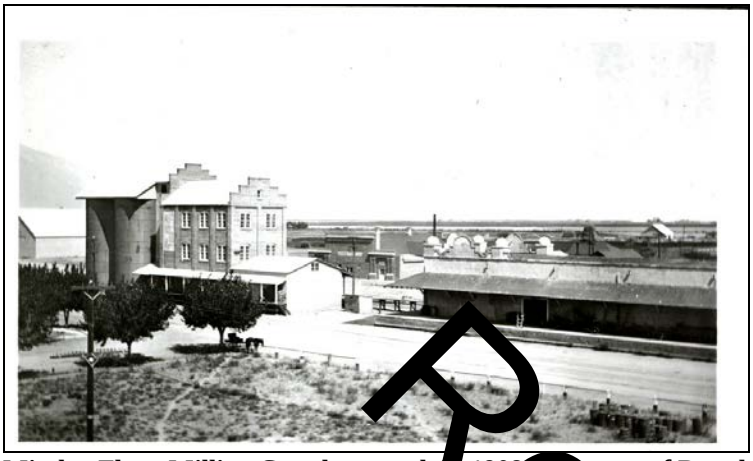
Dairy processing facilities, dominated by creameries, are among the most important of Carson and Eagle Valley's agricultural industrial buildings. Several creameries were established in Carson Valley during its dairying boom years from the 1890s forward to the 1940s, of which two are known to still exist at the time of drafting this document: the Douglas Valley Creamery on the Henningsen Ranch, and the second Minden Butter Manufacturing Company building, constructed in 1916 near the Minden Flour Milling Company. Various creameries had been constructed throughout the valley, including the Carson Valley Creamery on the Dangberg Home Ranch. In Minden, the Minden Butter Manufacturing Company was first built in 1908 as a wooden frame building to process and store dairy products near the railroad terminus. The first plant had two vats for separating cream and milk, each with a 600-gallon capacity. The facility boasted all electrical equipment, including cooling coils, churns, and dehydrators. Early on, the company sold butter under the brand name "New Holland Process." By June of 1915, the daily production of the creamery had exceeded 30,000 pounds per month, and it became evident that a larger facility was needed to process the tremendous volume. Edwin Millar leased the livery in downtown Minden, then owned by the Dangberg Company, to operate as a dairy into the 1920s, providing milk for a local market. The Dangberg Company sought to expand its own creamery operations for markets farther afield, contracting with famed Nevada architect Frederic J. DeLongchamps to design a new brick facility with more floor space and upgraded equipment, completed in 1916 as the Minden Butter Manufacturing Company (NRIS #[86000263]). With poultry becoming increasingly important, in 1927 a new building was constructed west of the Butter Manufacturing Company to house an egg plant and cold storage building, for use by the Carson Valley Poultry Association. The demand for dairy and egg products from the valley, mainly for Lake Tahoe markets, became so great that an expansion was added in 1942 that joined the main building to the egg and cold storage facility.[158]

With hay and grain farming being a quick addition to the agricultural landscape of the valleys by the 1850s, grain and flour milling quickly became a prominent part of area towns. Millwright Thomas J. Knott constructed the area's first mill in Genoa in 1854 for John Reese, situated on Mill Street. This was followed around 1857 or 1858 with a flour mill for Hiram Mott just north of Mottsville and constructed by millwright Sam Silliman. In 1865, William M. Cary acquired the Genoa mill and moved it to the foot of Kingsbury Grade. It operated under various ownership, including Robert Falcke under the name Farmer's Mill, until at least the early 1900s. Most of these early mills used stone grinders, many of which were shipped in from California. The Reese Mill in Genoa was operated with two buhr stones, referred to as a run of buhrs. The bottom buhr was stationary while the top buhr turned. They were about five feet in diameter and ten to twelve inches thick. The stone was a cream-colored knotty porous quartz. The stones usually came in fifty or sixty pound sections and were fit together at the mill site similar to keystones.[159]

In 1895, the Douglas Flour Mill was constructed along Long Valley Creek just above where it flows into the East Fork of the Carson River. The Douglas Mill was a three-story structure with equipment that weighed thirty thousand pounds. The mill operated until 1912 when J.N. Anderson and Fred W. Sarman established a new mill in Gardnerville and removed the machinery from the Douglas Mill. In 1900, William F. Dressler and Henry and H.H. Beck established the Eagle Roller Mill Company, establishing a mill north of Genoa on Adams Creek. In 1906, William F. Dressler, Henry F. Dangberg, Jr., Richard Bassman, H.H. Springmeyer, and C.M. Henningsen incorporated the Minden Flour Milling Company (NRIS #[78001721]), which became the largest of all the mills established in Carson Valley. In its first years, the Minden Flour Milling Company used horse teams to transport flour to markets in Mono County, California, but steadily enhanced marketing in the early twentieth century meant that demand increased. By the mid-1920s, the company used trucks to transport flour to Mono

[158] Maule, 89-91, 98.
[159] Dangberg, *Carson Valley*, 48-51.

County, still its principal market. In 1927, chicken feed processing equipment was added to the mill. It was converted to a feed mill around 1937 under the direction of Frank Reed. By 1956, modern feed mixers, a pellet mill, a molasses mixer, cleaners, and grinders were installed in the mill to produce livestock feed. The mill closed operations in the late 1960's, and was purchased by Bently Nevada, Inc. in 1975; it still stands at Railroad Avenue and Sixth Street in Minden and was listed in the National Register in 1978. As of the drafting of this MPDF, Bently Enterprises was completing a major rehabilitation of the mill into a new business space for downtown Minden.[160]



Minden Flour Milling Co., shown at left, 1908 (Courtesy of Douglas County Historical Society), and at right in 2014 before rehabilitation began (NVSHPO, 2014).

Warehousing was equally important to the agricultural industry along the Carson River. With Minden becoming a railroad terminus and the economic center of Carson Valley by 1906, the need for a warehouse near the railroad depot became apparent. The Meyers Mercantile Company building near the Minden Flour Milling Company, and an extension from the company's store in Carson City, was constructed in 1907, fast becoming the valley's primary freight depot, warehousing finished agricultural goods and being the loading point for freight trains that entered the valley. The building changed ownership several times until several farmers formed the Farmer's Cooperative Mercantile Company, operated by Nelson and Henry Mack. The store burned down in 1926, eventually to be replaced by a new building on the same site. Alongside the Mercantile, several large farmers and ranchers, led by the Dangberg Company, constructed the Carson Valley Hay and Produce Company to serve as an extension of the warehousing at the Mercantile. Finished in 1909, the barn was 208 feet long and 70 feet wide, constructed of Oregon pine, being one of the largest barns in Nevada. It was large enough that a spur of the Virginia & Truckee Railroad was built through the barn to provide for easier loading and unloading. However, a strong wind blew down the barn in 1925, and it was never rebuilt. Adding to the warehousing facilities in downtown Minden was the Minden Wool Warehouse, constructed in 1916 to house wool on its upper levels and potatoes on its lower levels. It served in this capacity until the 1940s, when Nevada's potato industry succumbed to larger national producers in other regions, and was converted fully to offices by the 1960s.[161]

Sawmills are not specifically related to agricultural development, but did provide the lumber for the home and barn construction on the ranches and farms of Eagle and Carson Valleys. The first to be established was built by millwright Thomas Knott on the mouth of the Carson (Woodfords) Canyon in 1853. Run by a flutter wheel, this first sawmill was sold that year to William Thorington who continued to operate it under the name Cary Mill. Knott also built a mill in Mill Creek Canyon (later known as Genoa Creek) in Genoa in 1854. Ira M. Luther, a rancher in the upper part of Carson Valley near the community of Fairview, established a sawmill at the mouth

[160] Dangberg, *Carson Valley*, 48-51; Maule, 83-85.
[161] Maule, 86-87, 106-107, 126.

of Luther (or Fay) Canyon in 1858. Farther up the valley in Fredericksburg, California, several other sawmills provided lumber from the forests near there and Woodfords.[162]

[162] Dangberg, *Carson Valley*, 51-53

Registration Requirements

Agricultural Industrial Buildings will usually be eligible under Criterion A, in the area of *Agriculture*. However, it is possible that they may be eligible under the other Criteria in special circumstances and where they are very well preserved. In general, to be eligible, these buildings should have a clear and demonstrated significance to the agricultural history of Carson or Eagle Valleys, and should retain strong integrity in all seven aspects. It would be most important for an agricultural building to display integrity of location, design, materials, workmanship, and association to its historic use as a creamery, mill, or other industrial facility. Common alterations that may not necessarily detract from the integrity of these resources include equipment upgrades, and alterations or additions constructed to facilitate the continued use of the resource for its historic purpose during its period of significance. Alterations not dating to the period of significance that are sensitive, retain the resource's key character-defining features, and allow the property to convey its significance may allow a property to remain eligible for the National Register.

Douglas County Creamery on the Henningsen Ranch in Waterloo, September 10, 1908. Courtesy of Douglas County Historical Society.

Douglas County Creamery on the Henningsen/Gansberg Ranch in Waterloo. Nevada SHPO, July 7, 2016.

G. Geographical Data

This Multiple Property Documentation Form corresponds to the upper Carson River watershed in both Douglas and Carson Counties in Nevada. Although the context included in this MPDF touches on resources in California and Nevada's Smith and Mason Valleys due to necessity, the bulk of resources related to this context are found in Nevada in Douglas County and Carson City, concentrated around the communities of Genoa, Gardnerville, Minden, Sheridan, Mottsville, and Carson City. Historical communities such as Centerville, Waterloo, Fairview, Empire, and Lakeview are referenced in this document and remain as landmark communities today, although their governance is provided by either Carson City or Douglas County. The Tahoe Basin, including communities such as Glenbrook, at one point provided summer pasture for many of the cattle and sheep operations in Carson Valley, but due to the Basin's development into a predominantly outdoor tourism-focused area, the Basin is not included in this study area. Also, although Carson and Eagle Valley ranchers frequently drove their livestock throughout the region during the year, from as far west as western Alpine County, California, to as far east as Mason Valley in Lyon County, Nevada, their bases of operations remained in the Carson River watershed in Douglas County and Carson City, thus providing the boundary for this study area. Also, for the purposes of this study, Jack's Valley, sometimes referred to as a separate geographic feature, has been considered part of the Carson Valley complex.

H. Summary of Identification and Evaluation Methods

This MPDF was completed in response to several requests for nominations to the National Register of Historic Places by ranch owners, predominantly in Carson Valley. Staff of the Nevada SHPO produced this document in an effort to reduce the time necessary to complete nominations, and to provide a synthesis of the region's history as one of Nevada's earliest agricultural centers. The SHPO hopes that this document will promote and provide access to the National Register for more historic ranch owners within the study area.

Both Jim Bertolini (Historian) and Kristen Brown (Architectural Historian) of the NVSHPO conducted a reconnaissance-level survey of ranches in the study area in July of 2016, with some spot follow-up in December of 2016 as previously unknown ranches were discovered, or critical areas could be re-photographed without tree cover. Prior to field work, the team used aerial imagery of the study area along with historical records to map expected historic ranch sites throughout the valley. During field survey, sites that were observed in the field that were missed by the aerial survey were added to the data-set, which recorded a total of 94 Ranch Complexes, as well as a small number of isolated agriculturally-related resources such as irrigation features and agricultural industrial buildings. In every case, photographs and geographic location were recorded for each resource or Ranch Complex. In most cases, intensive research about individual ranch complexes was not undertaken unless that ranch presented itself as particularly important to the production of the context, such as those owned by key individuals such as the Danghergs, Dressers, Settelmeyers, and Springmeyers, or if a unique opportunity to address sites significant under Ethnic Heritage presented itself, such as the three African American-owned ranches in Sheridan. Beyond a near-exhaustive review of the secondary literature for agriculture in the region, primary sources were accessed at both the Douglas County Historical Society archives, and the University of Nevada, Reno's University Archives and Special Collections. Research emphasis within these collections was given to regional collections, or primary sources that addressed ranches being considered or nominated under this MPDF, such as William Lampe's ranch south of Gardnerville and Louis Stodieck's ranch south of Minden. Robert A. Allen's Papers at UNR proved especially helpful in reconstructing Carson Valley's agricultural landscape in the early twentieth century.

The historic context was largely in response to citizen and property owner interest in nominating places in Carson Valley to the National Register. It was also influenced by the importance of Carson Valley to Nevada's foundation as a state, and by the importance of Carson Valley, and to a lesser extent Eagle Valley, to the state's agricultural history. This combination of factors compelled the Nevada SHPO to take on this project in-house for what was perceived to be a long-term benefit to the state's preservation network. The SHPO would also like to acknowledge the peer review support of Drs. Jonathan Foster (Great Basin Community College) and Leisl Carr-Childers (University of Northern Iowa), as well as ZoAnn Campana (Kautz Environmental Consultants). Darrel Cruz (Washoe Tribal Historic Preservation Officer), Dr. Dana Bennett (Nevada Mining Association), Geralda Miller (historian), and Paul Oatman (structural engineer) provided important research assistance on various topics within the context.

Property types above were selected based on their expected path to the National Register, rather than strict architectural classification. The Ranch Complex was and is the fundamental unit of historic ranches in the study area, and so received the most attention. Ancillary buildings and structures were generally considered to be ineligible for individual listing in the National Register, and are detailed under Ranch Complexes as they are expected to be historic as contributing elements in Ranch Complexes, rather than on their own. The requirements for registration and integrity were based on observations in the field. The project team observed a number of ranches with either significant alterations or modern additions, as well as a surprisingly high number of what appeared to be intact complexes. Furthermore, development pressure threatens additional ranches in the study area, especially in Carson City/Eagle Valley. As a means of encouraging the recognition and preservation of these places, registration requirements focus on association of a property to the overall context of agriculture, and how well the ranch reflects that historic period.

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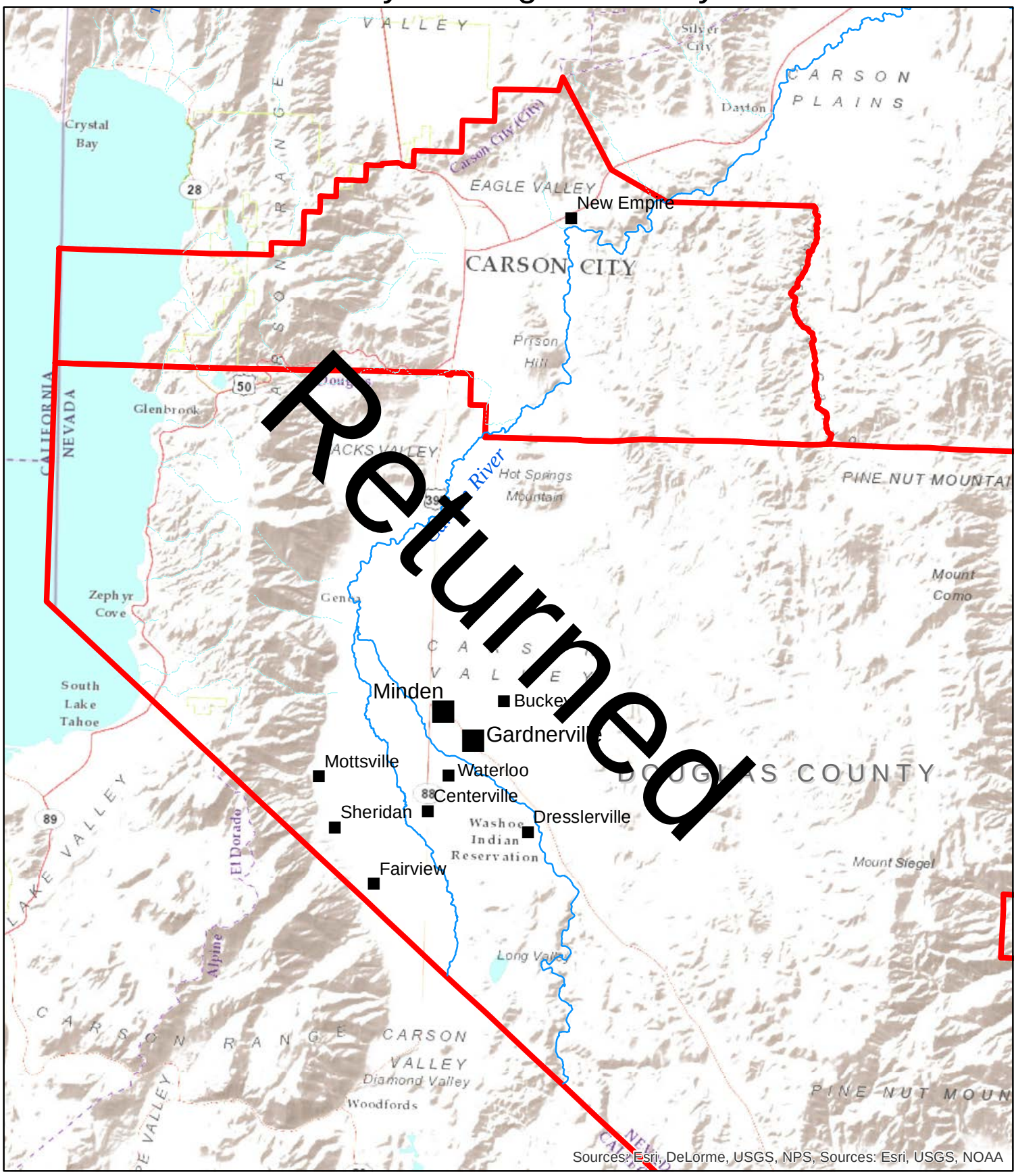
Agriculture on the Carson River
Carson City & Douglas County

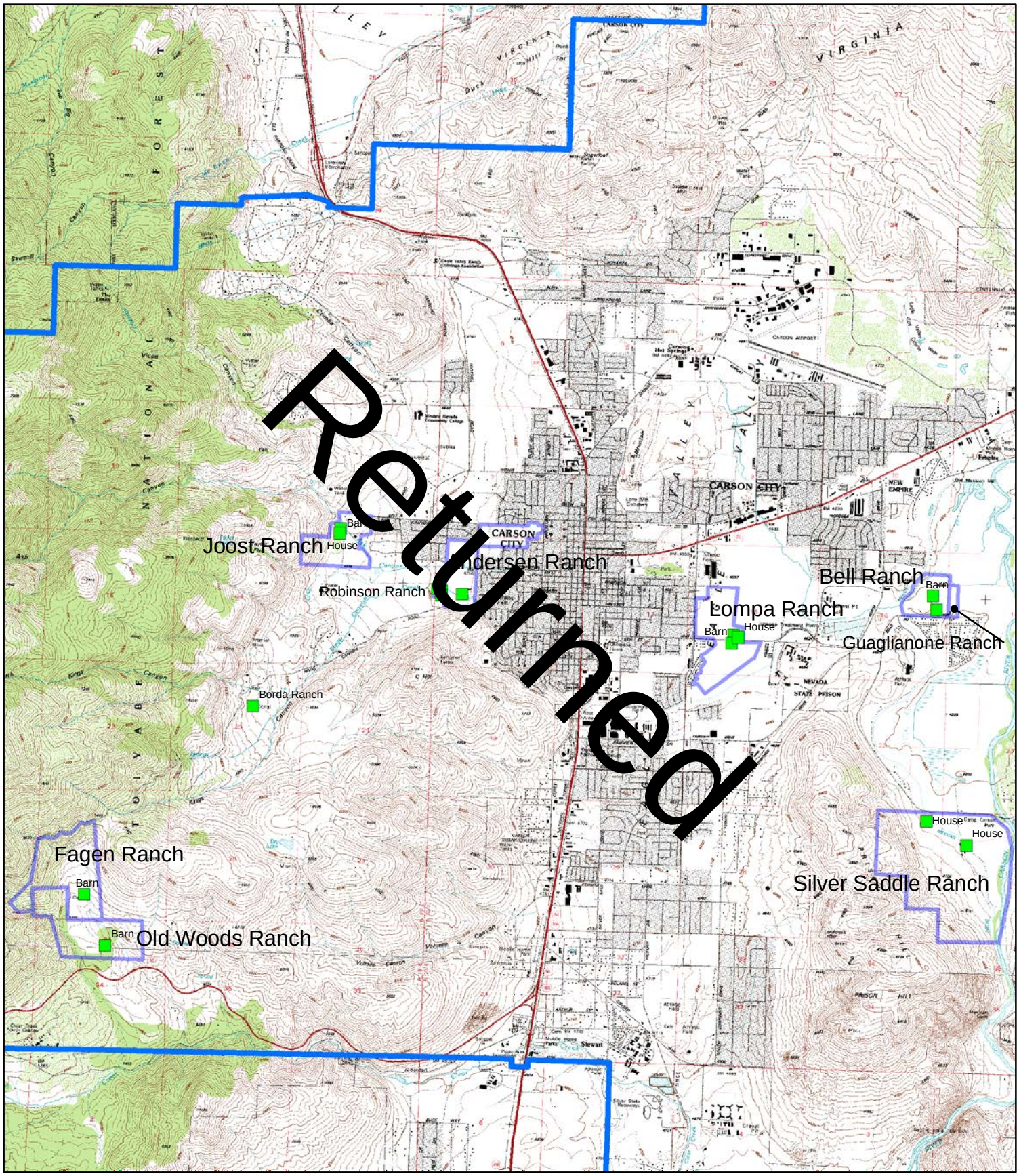


Author: NVSHPO (Bertolini)
Date: 3-7-2017
Datum: NAD 83
Projection: UTM Zone 11 North
Source: NAIP 2015

0 1.75 3.5 7 10.5 14 Miles

N

Agriculture on the Carson River
Carson City and New Empire Area Ranches



Author: NVSHPO (Bertolini)
Date: 3-7-2017
Datum: NAD 83
Projection: UTM Zone 11 North
Source: USGS; NVSHPO

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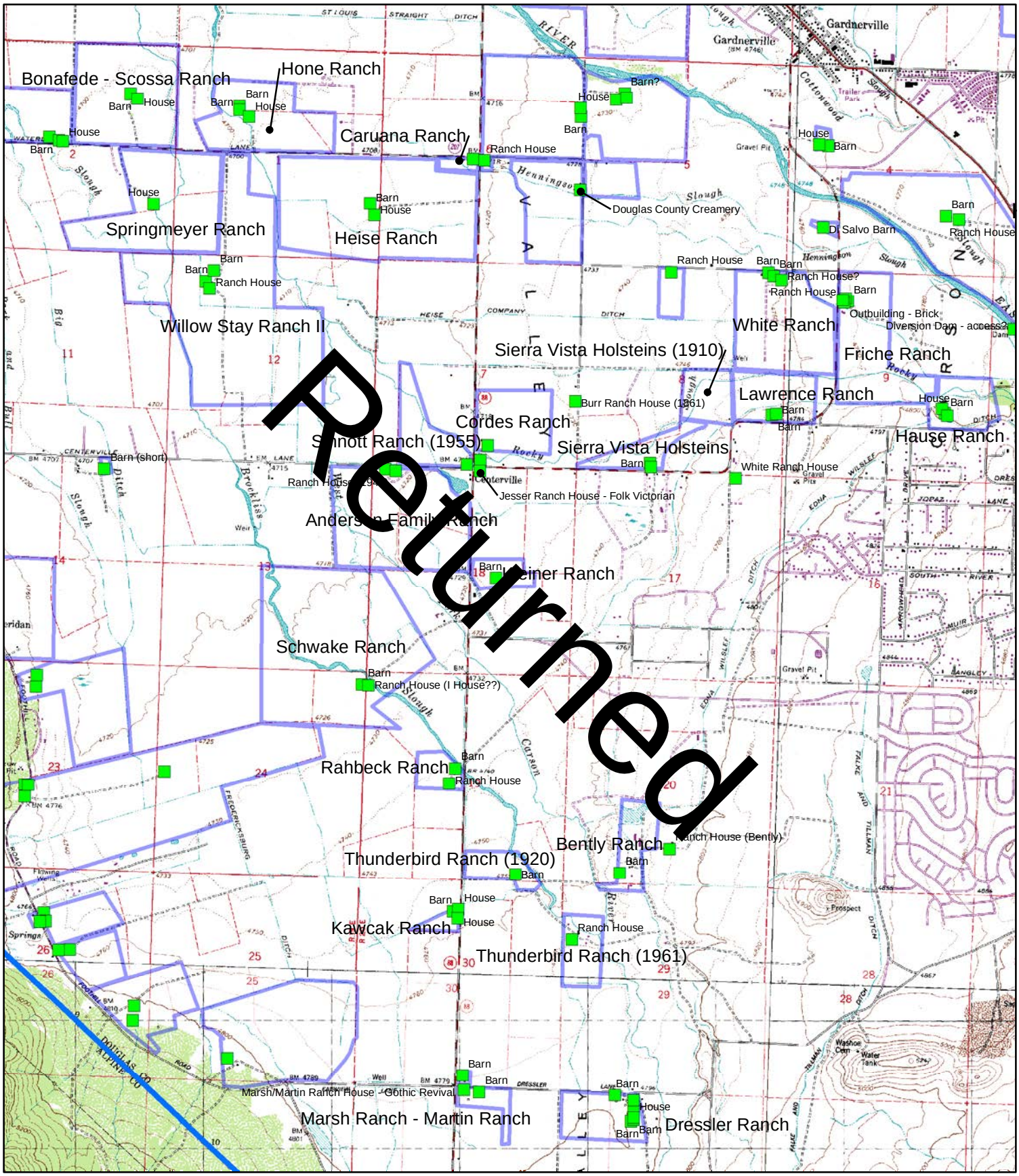
N

Agriculture on the Carson River
Centerville Area Ranches



Author: NVSHPO (Bertolini)
Date: 3-7-2017
Datum: NAD 83
Projection: UTM Zone 11 North
Source: USGS; NVSHPO

0 0.225 0.45 0.9 1.35 1.8
Miles

N

Agriculture on the Carson River
Dresslerville Area Ranches

Author: NVSHPO (Bertolini)
Date: 3-7-2017
Datum: NAD 83
Projection: UTM Zone 11 North
Source: USGS; NVSHPO

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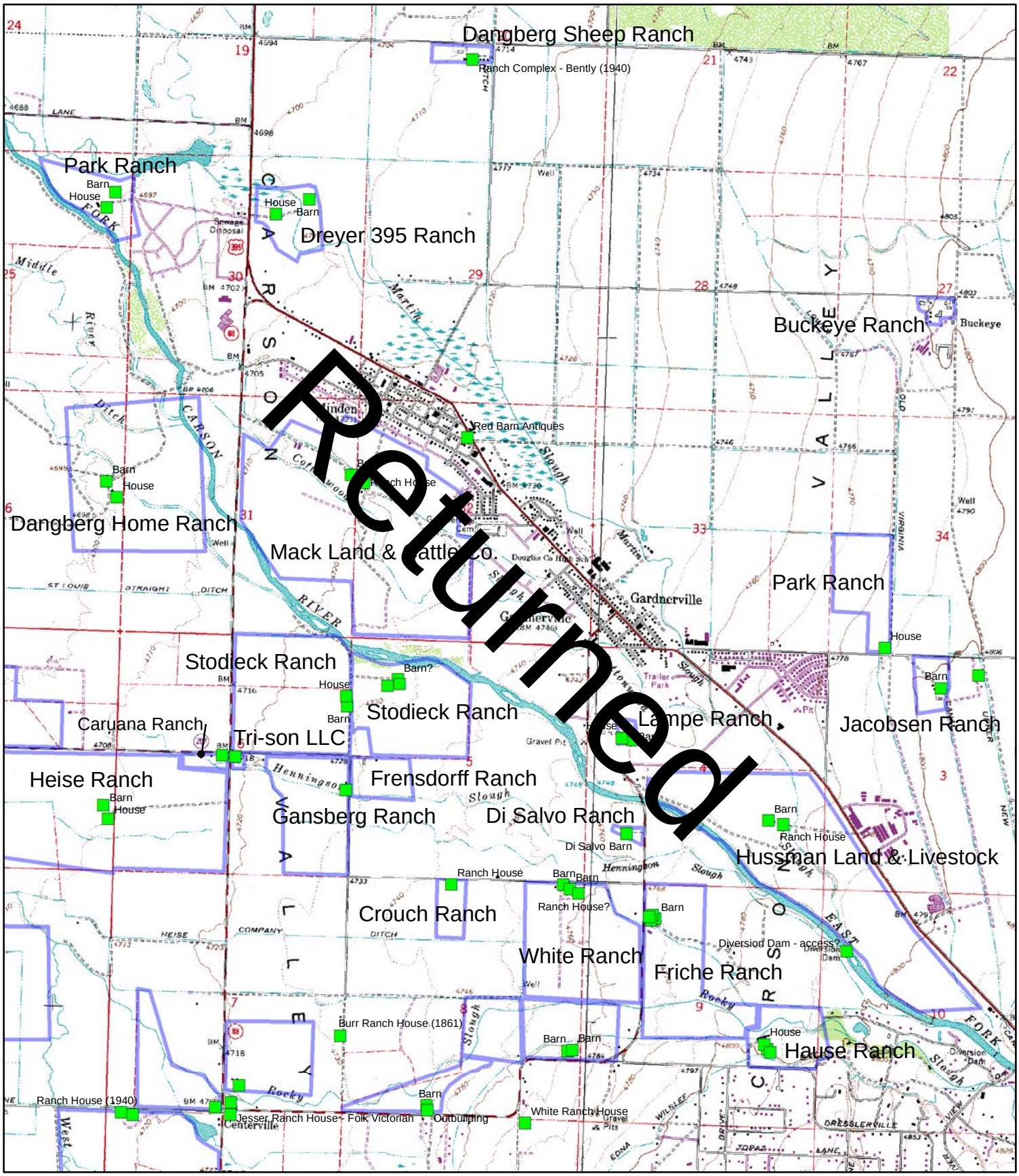
N

Agriculture on the Carson River
Minden & Gardnerville Area Ranches

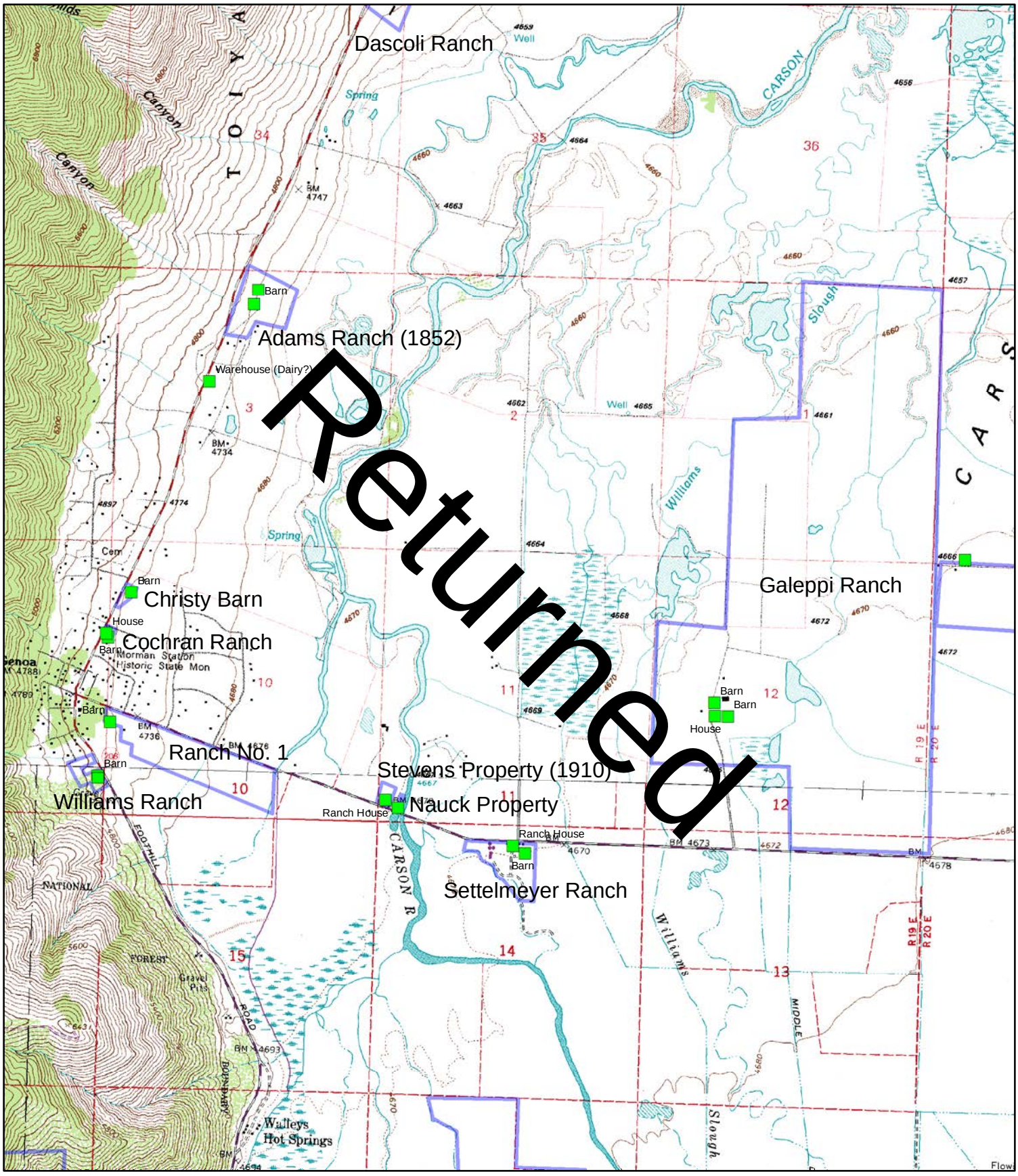


Author: NVSHPO (Bertolini)
Date: 3-7-2017
Datum: NAD 83
Projection: UTM Zone 11 North
Source: USGS; NVSHPO

0 0.2 0.4 0.8 1.2 1.6
Miles

N

Agriculture on the Carson River
Genoa Area Ranches



Author: NVSHPO (Bertolini)
Date: 3-7-2017
Datum: NAD 83
Projection: UTM Zone 11 North
Source: USGS; NVSHPO

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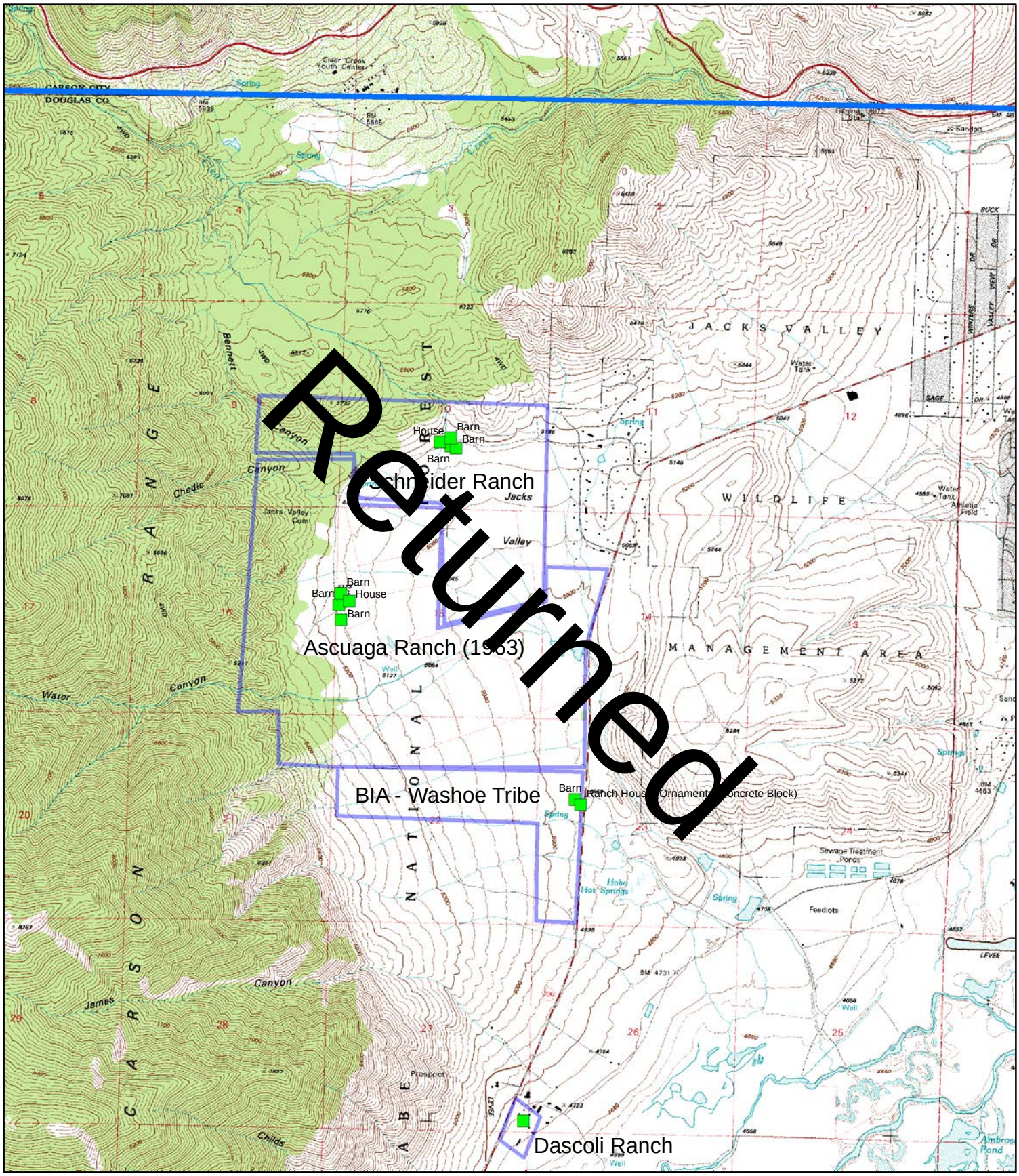
Miles

N

Agriculture on the Carson River
Jack's Valley Area Ranches

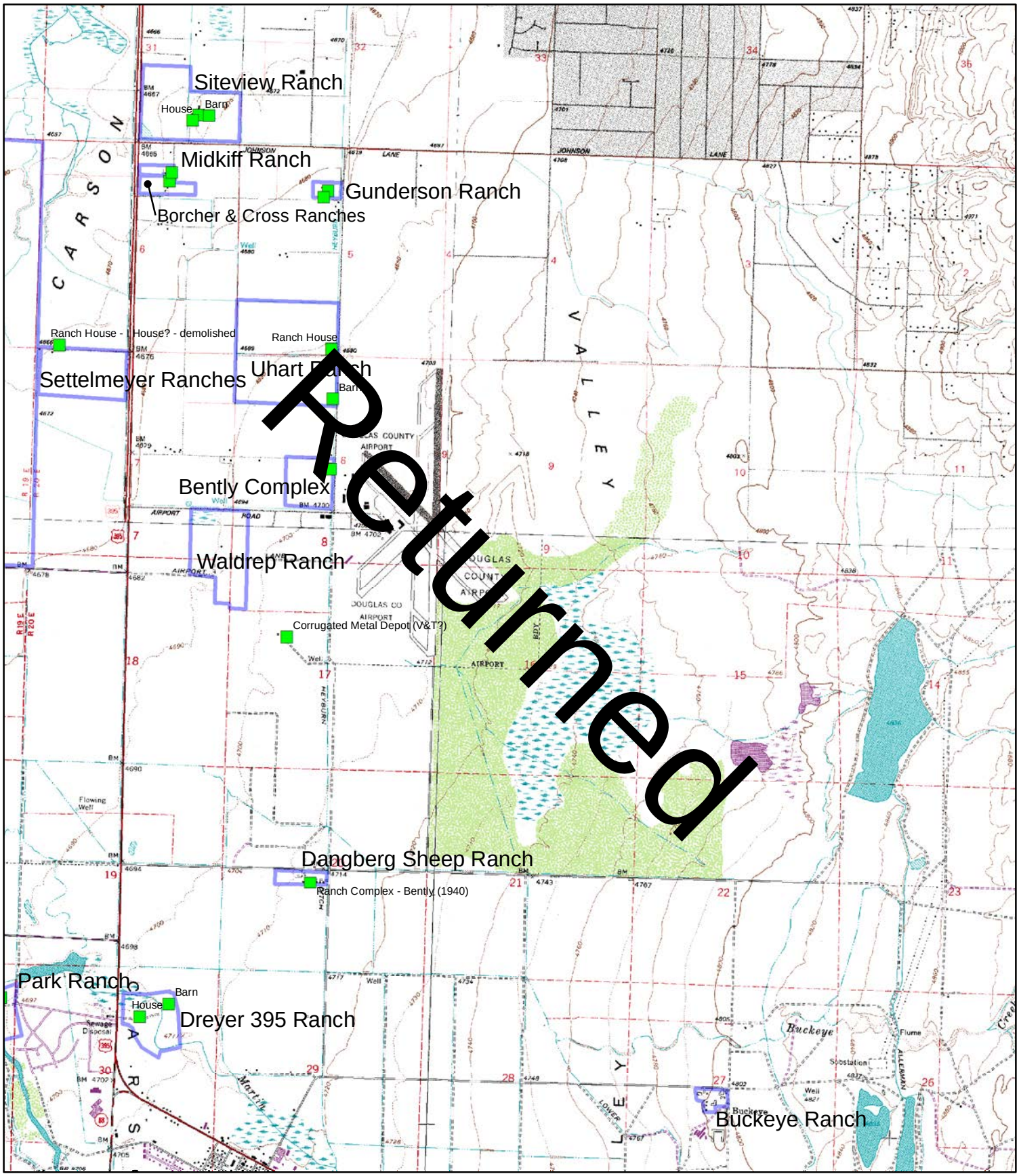


Author: NVSHPO (Bertolini)
Date: 3-7-2017
Datum: NAD 83
Projection: UTM Zone 11 North
Source: USGS; NVSHPO

0 0.225 0.45 0.9 1.35 1.8
Miles

N

Agriculture on the Carson River
Johnson Lane & Buckeye Area Ranches

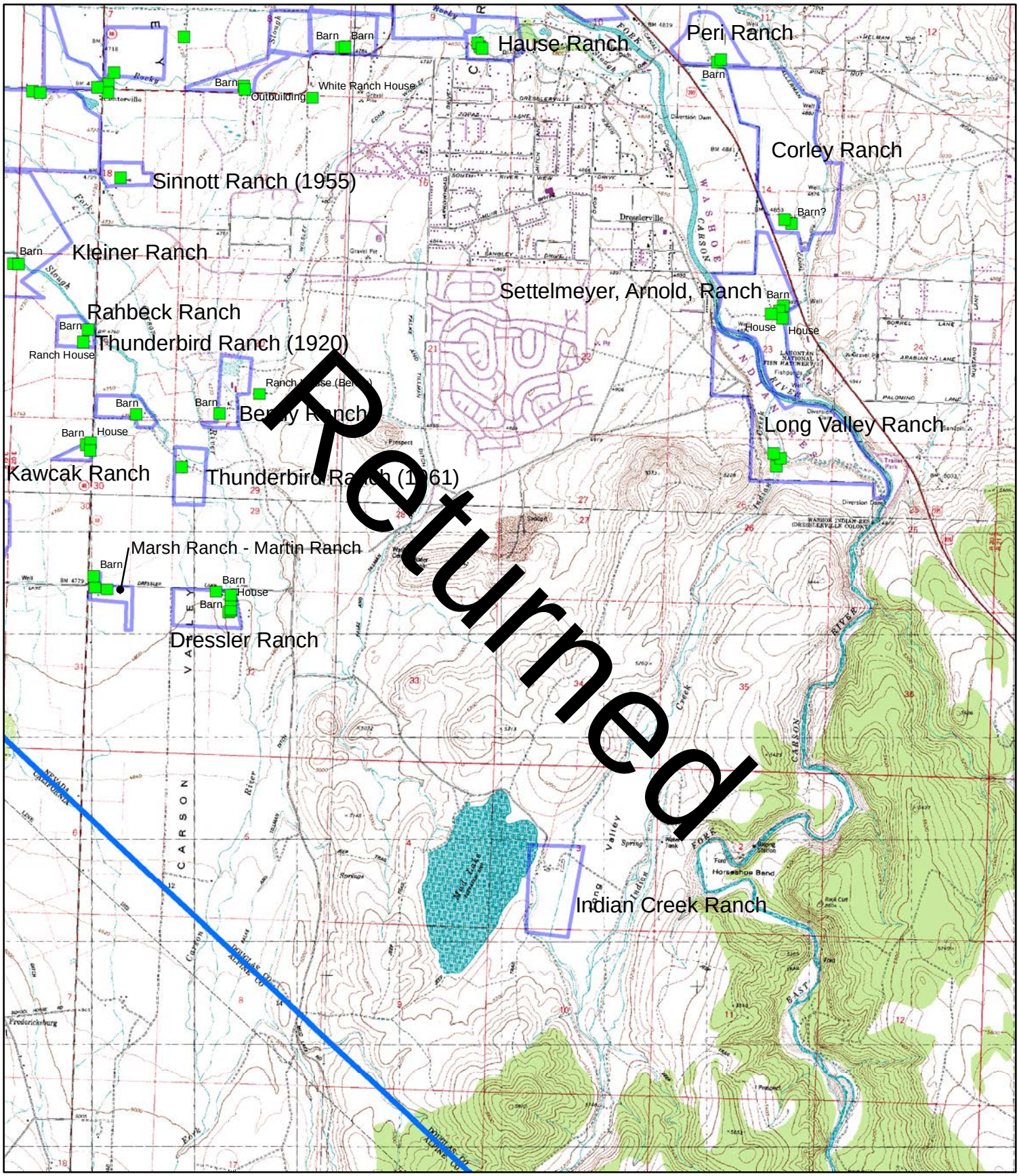


Author: NVSHPO (Bertolini)
Date: 3-7-2017
Datum: NAD 83
Projection: UTM Zone 11 North
Source: USGS; NVSHPO

0 0.225 0.45 0.9 1.35 1.8 Miles

N

Agriculture on the Carson River
Long Valley & Dresslerville Area Ranches

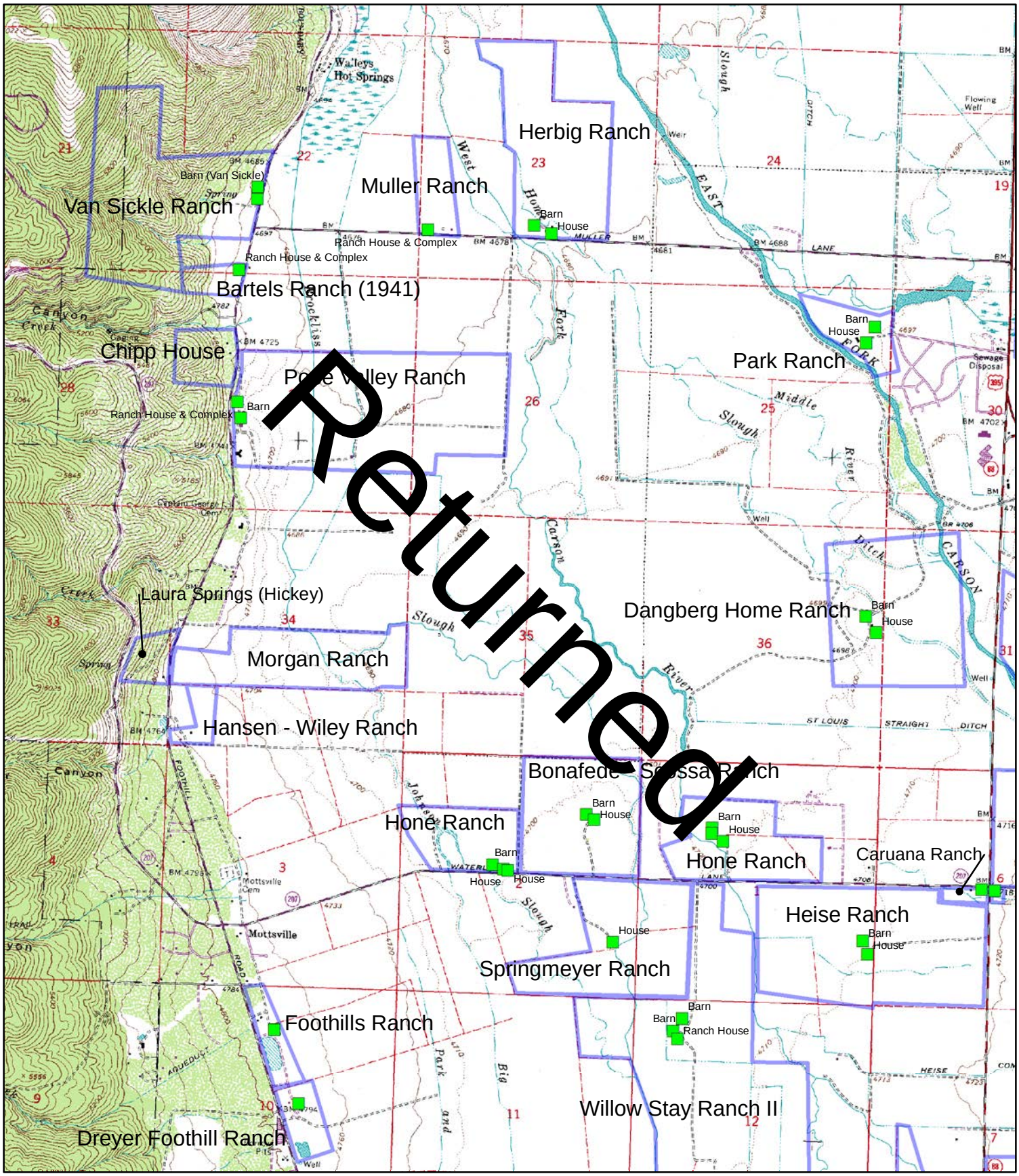


Author: NVSHPO (Bertolini)
Date: 3-7-2017
Datum: NAD 83
Projection: UTM Zone 11 North
Source: USGS; NVSHPO

0 0.275 0.55 1.1 1.65 2.2
Miles

N

Agriculture on the Carson River
Mottsville Area Ranches

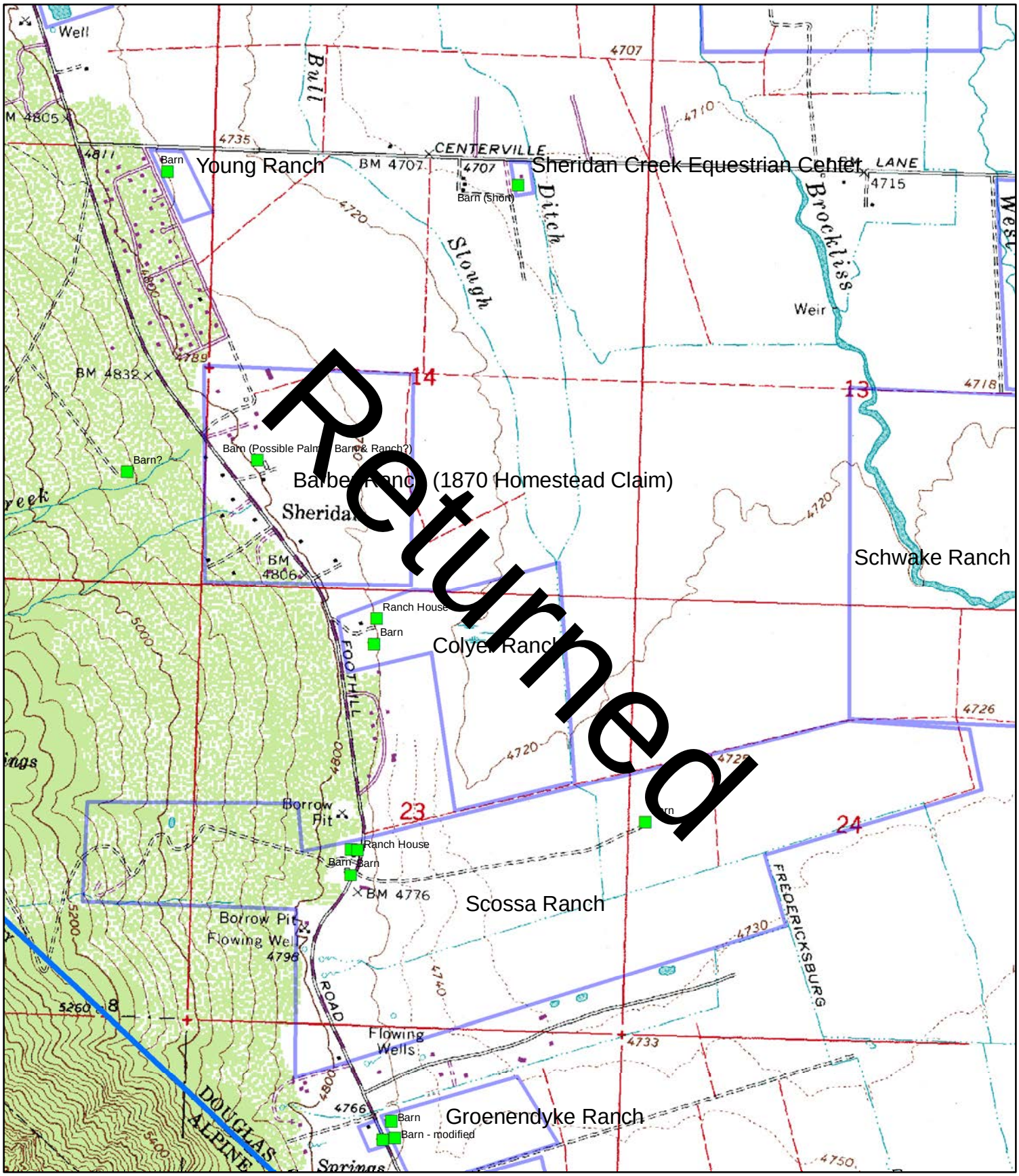


Author: NVSHPO (Bertolini)
Date: 3-7-2017
Datum: NAD 83
Projection: UTM Zone 11 North
Source: USGS; NVSHPO

0 0.2 0.4 0.8 1.2 1.6 Miles

N

Agriculture on the Carson River
Sheridan Area Ranches

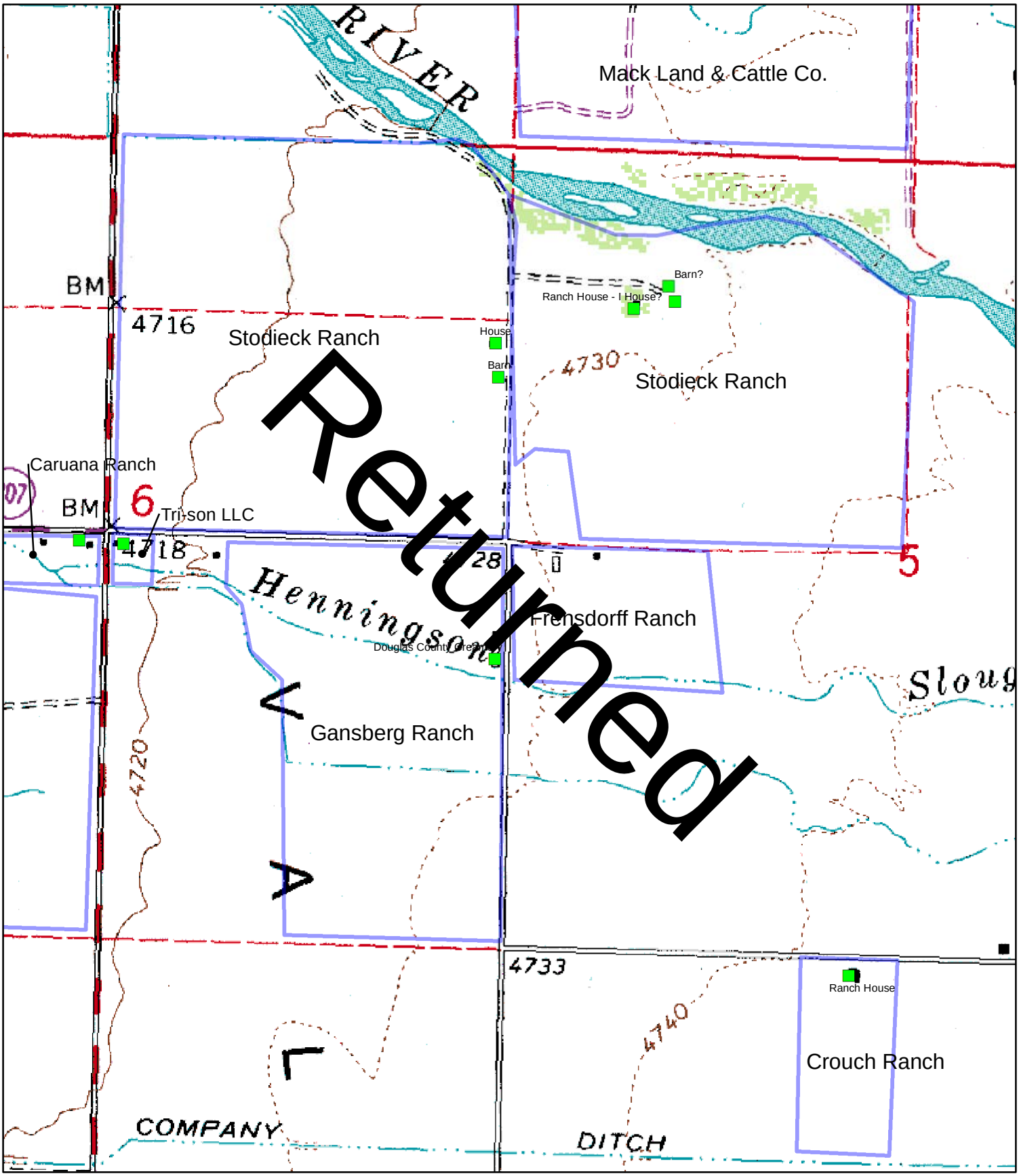


Author: NVSHPO (Bertolini)
Date: 3-7-2017
Datum: NAD 83
Projection: UTM Zone 11 North
Source: USGS; NVSHPO

0 0.1 0.2 0.4 0.6 0.8 Miles

N

Agriculture on the Carson River
Waterloo Area Ranches



Author: NVSHPO (Bertolini)
Date: 3-7-2017
Datum: NAD 83
Projection: UTM Zone 11 North
Source: USGS; NVSHPO

0 0.05 0.1 0.2 0.3 0.4 Miles

N

United States Department of the Interior
National Park Service
National Register of Historic Places

Comments
Evaluation/Return Sheet

MPDF Name:	Agriculture on the Carson River in Nevada's Douglas and Ormsby Counties
MPDF Location:	Douglas and Ormsby Counties, Nevada
Reference Number:	MC 10001619
Date of Return:	9-20-17

Reason for Return
The multiple property cover document provides an excellent history of ranching in Douglas County and Ormsby County, Nevada, and the overview of ranching and farming in northern Nevada provides an important introduction to the context. The cover document is being returned for a re-examination of some aspects of the context in Section E and the identification and delineation of property types in Section F. Minor technical issues should also be corrected.

Section A, Name
Consider adding the inclusive dates to the name. This is not required, but may be useful.

Section E, Contexts

1. The period for this context is considered to be 1850 – 1980. The 1980 end date is not well explained, although it seems related to population growth (p. 44). None of the chapters in the context use 1980 as an end date. Should "Diminishing Returns in an Urban State" end in 1980 instead of the present? Please explain or change 1980 as the end date for the context.
2. Consider cross-referencing parts of the text with maps to facilitate an understanding of the location of various descriptions.
3. Including descriptions of women, African Americans, Basques, and Indians in Section E is very useful, even with the admission that additional studies are needed. Elsewhere in the MPDF, reference is made to Chinese laborers (see p. 53) and the Chinese farm labor camp (p. 59). Was there an Asian presence in the ranching area covered by the MPDF and is enough known about Asians here to include a similar section?

4. Barn Architecture needs some clarification as a context and as property types. Some issues are:
    a. The context extends to 1980, but barn architecture only extends to 1950. Please explain. Also, the descriptions of twentieth century barns is minimal. Should the context be re-focused or merged? Please see the next point.
    b. Would barn architecture work better as a chapter within the broader context in Section E? In that case, barns would be grouped with the other outbuildings described in the ranch complex property type. The potential for individually eligible barns seems slight, but their contribution to a ranch complex is important. If this statement is incorrect, the registration requirements need to be strengthened in terms of the eligibility of individual barns.
    c. Is the barn terminology based on Oatman's work considered definitive in northern Nevada? This information may be explained in Oatman's "Sierra Nevada Barn Evolution," but settlers in this area seem quite removed from German, Dutch, and English settlers farther east whose traditions may have inspired the barn names. Are barns typically identified by ranchers and farmers in in the area as English, Dutch, and German? Are there other terms used locally that correspond with these vernacular interpretations?
    d. The strength of this section is the explanation of construction techniques and distinctions, but the barns should be made more relevant to the agriculture of the particular form (and how it evolved over time). Their typical placement in a ranch complex also should be described.

Section F, Property Types

Ranch Complex. The property type "ranch complex" seems to pertain mostly to what some other western states refer to as the "headquarters." Although pastures and fields are described as a component of a ranch complex (page 67), it is not clear to what extent they should be included. "If present, possessing clear association to the property's significance, and retaining integrity to the period of significance," they should be included within the boundary and counted as at least one contributing site. The registration requirements do not seem to indicate that ranch land is critical to the integrity of the complex. It is also not clear how the integrity of the land is evaluated, except that it should "still generally reflect its period of significance" (p. 78, Setting).

Please explain under what circumstances the land is not important to include. The land is where the ranching took place. Generally, it should be considered an essential part of the ranch resource. If this property type "ranch complex" is intended primarily to nominate the collection of buildings, it seems that another property type "ranch" is needed. Such a property would encompass the entire ranch—or a good portion of the land that retains integrity. Integrity may be defined by the presence of gates and fences, an internal circulation pattern, groups of vegetation, and other variables described in the *Rural Historic Landscapes* bulletin.

Could there be a collection of contiguous ranches that form a rural historic district? This may not be known, but the possibility should be introduced, with the full guidance provided any property type, unless there are reasons of integrity that preclude this possibility.

Community Planning and Development does not seem like an appropriate use of this area of significance. Please note if this should be a rare application, to be used if a housing development is part of the ranch complex. Simply because a master plan exists does not necessarily convey a "community." More explanation of planned communities as part of ranches should be provided in the context statement.

Please reconsider some aspects of the discussion of Criterion D on page 59. It seems "archaeology" in the discussion refers to subsurface remains, unless buildings or structures are referenced specifically. Please clarify and perhaps use "subsurface archaeology" where that is the case. The application of Criterion D to standing buildings is actually rare, but certainly an important application if buildings can answer important research questions. You might mention this to offset any confusion. Last, the subsurface archaeology that most ranches have "may not be significant for their information potential, and thus not significant under Criterion D;" however, it may be that this simply has not been explored sufficiently to determine if that's the case—perhaps not enough is known to apply Criterion D. Please feel free to consult with Julie Ernstein about this section.

Barns. The observed barn types are not discussed in the context, which, as already mentioned, uses the terms "English, Dutch, and German" barns. The context and property type definitions should be reconciled. High barns, low barns, and dairy barns should be a component of the context and vice-versa. Some explanation of the source of the plans might be offered, if known. For example, did the Nevada extension office issue any barn plans?

In the registration requirements section, please consider what this statement may convey: if A and C are applied "location is less important than integrity of design" etc. The explanation that follows seems reasonable, but this statement taken out of context could imply a casual acceptance of moved outbuildings.

A couple of statements that underplay the significance of a barn's setting (p. 99, 100) confuse the nature of an individually nominated barn. Would such a barn be carved out of the rest of the complex, with boundaries perhaps a matter of feet beyond the walls? Such nominations are occasionally submitted, and the lack of a setting can be problematic. On the other hand, if the rest of the complex has been removed around the remaining architecturally significant barn, a bigger setting should be possible. These thoughts may be worth exploring in your discussion of individually eligible barns.

Agricultural Industrial Building. The agricultural industrial history of these counties is not well covered in the context. If this property type is to be included, this history needs to be more fully explored. The property type description should include a more thorough definition of "agricultural industry" –beyond "support the farming and ranching industry." Actually, they would seem to relate more specifically to processing and storing. Sawmills seems like a stretch as an agricultural industry, unless farmers and ranchers included tree harvesting among their agricultural pursuits—and no such claim has been made. Please reconsider the inclusion of sawmills or expand upon the context in Section E and the rationale in Section F. If this section

does remain, it seems "industry" as an area of significance should be added in the discussion on page 109.

This nomination has many strengths and the well explored history is admirable! Congratulations on that, and please feel free to contact me about any of the points mentioned above. You can reach me at 202-354-2252 or at barbara_wyatt@nps.gov.

Barbara Wyatt, Historian
National Register of Historic Places
202-354-2252

Barbara Wyatt
9-20-17

NEVADA
STATE HISTORIC PRESERVATION OFFICE

Department of Conservation and Natural Resources
Brian Sandoval, Governor
Bradley Crowell, Director
Rebecca L. Palmer, Administrator, SHPO

February 26, 2018

Barbara Wyatt, ASLA
National Register/NHL Programs
National Park Service
1201 Eye Street NW
Washington, DC 20005

RE: Re-transmittal of Multiple Property Documentation Form MC 100001619, *Agriculture on the Carson River in Nevada's Douglas and Ormsby Counties*, and accompanying National Register Nomination 10001620, Lampe, Wilhelm & William Ranch, Gardnerville, Douglas County, Nevada

Ms. Wyatt,

The enclosed 2 disks contain the true and corrected copy of the nomination for the Multiple Property Documentation Form MC 100001619, *Agriculture on the Carson River in Nevada's Douglas and Ormsby Counties*, and accompanying National Register Nomination 100001620, Lampe, Wilhelm & William Ranch, Gardnerville, Douglas County, Nevada. Disk 1 includes the Multiple Property Documentation Form, and the Lampe Ranch nomination form, related correspondence, reports, and GIS data. Photographs for the Lampe Ranch National Register submission are included on disk 2.

Per your requests for more information, corrections and additions have been made to both documents. Your requests are below, with this office's response included after each request in italics.

MC 100001619, *Agriculture on the Carson River in Nevada's Douglas and Ormsby Counties*

Section A, Name
Consider adding the inclusive dates to the name. This is not required, but may be useful.

- *Because of the continued importance of agriculture to the economy and character of the study area, especially Carson Valley, specific dates have been removed from the titles of contexts and chapter headings to avoid confusion.*

Section E, Contexts

1. The period for this context is considered to be 1850 – 1980. The 1980 end date is not well explained, although it seems related to population growth (p. 44). None of the chapters in the context use 1980 as an end date. Should "Diminishing Returns in an Urban State" end in 1980 instead of the present? Please explain or change 1980 as the end date for the context.

   As noted above, dates have been removed from section titles to avoid confusion.

2. Consider cross-referencing parts of the text with maps to facilitate an understanding of the location of various descriptions.

This has been done in key areas, with the maps re-numbered to accommodate easier referencing, and a map guide included at the beginning of Section E.

3. Including descriptions of women, African Americans, Basques, and Indians in Section E is very useful, even with the admission that additional studies are needed. Elsewhere in the MPDF, reference is made to Chinese laborers (see p. 53) and the Chinese farm labor camp (p. 59). Was there an Asian presence in the ranching area covered by the MPDF and is enough known about Asians here to include a similar section?

   - *The section on immigrants and women has been significantly overhauled. Information on Asian Americans related to the study area's agricultural history is thin, although references in the primary sources do exist, especially regarding the hiring of Chinese cooks to serve in larger ranch kitchens and their work in constructing an early irrigation ditch. After the completion of the Central Pacific Railroad, most Chinese (and other Asian) individuals appear to have moved to mining or logging communities in the area, and did not engage in farming or ranching to a significant degree. However, among the purposes for this office to produce this MPDF has been to stimulate more research from our state scholars about agricultural history topics, so a section has been added to Section E with what we know now. Other additions for other significant ethnic groups have been added as well.*

4. Barn Architecture needs some clarification as a context and as property types. Some issues are:
   a. The context extends to 1980, but barn architecture only extends to 1950. Please explain. Also, the description of twentieth century barns is minimal. Should the context be re-focused or merged? Please see the next point.

      - *As mentioned above, dates have been removed from context and section headers.*

   b. Would barn architecture work better as a chapter within the broader context in Section E? In that case, barns would be grouped with the other outbuildings described in the ranch complex property type. The potential for individually eligible barns seems slight, but their contribution to a ranch complex is important. If this statement is incorrect, the registration requirements need to be strengthened in terms of the eligibility of individual barns.

      - *The Section E component for barn architecture has been retooled significantly, including new historiographical references. It has been subordinated to a chapter under the broader context in Section E.*

   c. Is the barn terminology based on Oatman's work considered definitive in northern Nevada? This information may be explained in Oatman's "Sierra Nevada Barn Evolution," but settlers in this area seem quite removed from German, Dutch, and

English settlers farther east whose traditions may have inspired the barn names. Are barns typically identified by ranchers and farmers in the area as English, Dutch, and German? Are there other terms used locally that correspond with these vernacular interpretations?

- *Mr. Oatman's work is the most definitive work available at present, although, as noted in Section E, Mr. Oatman is not an architectural historian and his work is based on engineering features rather than architectural design. This MPDF is the first attempt to synthesize some form of architectural history for barn types in the Carson and Eagle Valleys, which appear to be unique to the eastern Sierra Nevada Front. Settlers in this region were not far removed from German, Dutch, or English settlers in the east, as many of the settlers in the 1850s-1860s immigrated directly to Carson or Eagle Valley from those nations, as noted several times in Section E. While the referenced barn types in Section E and Section F have been retooled based on the terminology from Vlach and Noble, the ethnic origins of these barns is still critical to understanding their historical associations. As a result, we feel it is necessary to include brief contexts on English, German, and Dutch barn-building techniques as the two former traditions are especially present in most barns in the study area. Throughout the text, references to barn types in this area have removed the previous, manufactured, names, and replaced them with established terminology from Vlach and Noble.*

d. The strength of this section is the explanation of construction techniques and distinctions, but the barns should be made more relevant to the agriculture of the particular form (and how it evolved over time). Their typical placement in a ranch complex also should be described.

- *Connections to the use of these barns in the agricultural operations of ranches were made in the previous transmitted text, both in this section, and the preceding agricultural context. This section has been strengthened to cross-reference information. Text has been added to discuss the placement of Barns in a typical Farm/Ranch Complex, although reconnaissance survey revealed little standardized layout other than the general proximity to Ranch Houses, as elaborated by Nevada geographer Paul Starrs.*

Section F, Property Types

Ranch Complex. The property type "ranch complex" seems to pertain mostly to what some other western states refer to as the "headquarters." Although pastures and fields are described as a component of a ranch complex (page 67), it is not clear to what extent they should be included. "If present, possessing clear association to the property's significance, and retaining integrity to the period of significance," they should be included within the boundary and counted as at least one contributing site. The registration requirements do not seem to indicate that ranch land is critical to the integrity of the complex. It is also not clear how the integrity of the land is evaluated, except that it should "still generally reflect its period of significance" (p. 78, Setting).

Please explain under what circumstances the land is not important to include. The land is where the ranching took place. Generally, it should be considered an essential part of the ranch resource. If this property type "ranch complex" is intended primarily to nominate the collection of buildings, it seems that another property type "ranch" is needed. Such a property would encompass the entire ranch—or a good portion of the land that retains integrity. Integrity may be defined by the presence of gates and fences, an internal circulation pattern, groups of vegetation, and other variables described in the *Rural Historic Landscapes* bulletin.

- *Registration requirements have been clarified to state that the presence of agricultural space, specifically pastures and/or fields, is necessary for a Farm/Ranch Complex to be eligible under Criterion A in the Area of Agriculture.*

Could there be a collection of contiguous ranches that form a rural historic district? This may not be known, but the possibility should be introduced, with the full guidance provided any property type, unless there are reasons of integrity that preclude this possibility.

- *Yes – this has been included in the registration requirements for this property type, along with a discussion of how best to nominate this type of larger ranching district/community.*

Community Planning and Development does not seem like an appropriate use of this area of significance. Please note if this should be a rare application, to be used if a housing development is part of the ranch complex. Simply because a master plan exists does not necessarily convey a "community." More explanation of planned communities as part of ranches should be provided in the context statement.

- *The Community Planning and Development Area of Significance has been dropped and shifted to support the Agriculture area.*

Please reconsider some aspects of the discussion of Criterion D on page 59. It seems "archaeology" in the discussion refers to subsurface remains, unless buildings or structures are referenced specifically. Please clarify and perhaps use "subsurface archaeology" where that is the case. The application of Criterion D to standing buildings is actually rare, but certainly an important application if buildings can answer important research questions. You might mention this to offset any confusion. Last, the subsurface archaeology that most ranches have "may not be significant for their information potential, and thus not significant under Criterion D;" however, it may be that this simply has not been explored

sufficiently to determine if that's the case—perhaps not enough is known to apply Criterion D. Please feel free to consult with Julie Ernstein about this section.

- *Criterion D requirements were changed to address the statements above.*

Barns. The observed barn types are not discussed in the context, which, as already mentioned, uses the terms "English, Dutch, and German" barns. The context and property type definitions should be reconciled. High barns, low barns, and dairy barns should be a component of the context and vice-versa. Some explanation of the source of the plans might be offered, if known. For example, did the Nevada extension office issue any barn plans?

- *From available research and sources, there were never any specific terms applied to barns in the region. Oatman's "Nevada Barn" is the only unique term used, but the MPDF has been retooled to use common barn terminology from other, similar areas in the West. As noted previously, the context elaborates on English, Dutch, and German barns because these were the antecedents that are clearly visible in Carson Valley and Eagle Valley barns. The context has also been augmented to address barns constructed since 1950.*

In the registration requirements section, please consider what this statement may convey: if A and C are applied "location is less important than integrity of design" etc. The explanation that follows seems reasonable, but this statement taken out of context could imply a casual acceptance of moved outbuildings.

- *This section has been clarified to confirm the importance of integrity of location within what will likely be a larger ranching/farming complex.*

A couple of statements that underplay the significance of a barn's setting (p. 99, 100) confuse the nature of an individually nominated barn. Would such a barn be carved out of the rest of the complex, with boundaries perhaps a matter of feet beyond the walls? Such nominations are occasionally submitted, and the lack of a setting can be problematic. On the other hand, if the rest of the complex has been removed around the remaining architecturally significant barn, a bigger setting should be possible. These thoughts may be worth exploring in your discussion of individually eligible barns.

- *This section has been modified to clarify that barns will still likely need surrounding landscape to qualify, even if limited to corrals and modest pasture/field space.*

Agricultural Industrial Building. The agricultural industrial history of these counties is not well covered in the context. If this property type is to be included, this history needs to be more fully explored. The property type description should include a more thorough definition of "agricultural industry" –beyond "support the farming and ranching industry." Actually, they would seem to relate more specifically to processing and storing. Sawmills seems like a stretch as an agricultural industry, unless farmers and ranchers included tree harvesting among their agricultural pursuits—and no such claim has been made. Please reconsider the inclusion of sawmills or expand upon the context in Section E and the rationale in

Section F. If this section does remain, it seems "industry" as an area of significance should be added in the discussion on page 109.

- *The phrasing of this section suggested widespread agricultural industrial properties, which is not the case. The redraft has clarified this point, and renamed this property type the Agricultural Processing/Storage Building. Processing/storage properties were few, but significant. Section F has been amended to clarify that the Areas of Significance for this property are both Agriculture and Industry. This should address any concerns about the volume of agricultural "industry" addressed in Section E. Specific to sawmills, these have been moved and are now a subtype under the Farm/Ranch Complex property type. Many ranchers with sufficient water flow through their property, including Ira Luther (as noted in the context) operated sawmills to process their own timber stands and allow for easier construction of their own buildings. The scale of operations were not comparable to that of the Carson and Tahoe Lumber and Fluming Company, which are more appropriately addressed in a separate project, but sawmills are worthy of mention and consideration as part of agricultural operations where they appear.*

100001620, Lampe, Wilhelm & William, Ranch

Section 5. The number of resources needs to be checked. On page 15, the warehouse is labelled as contributing, but seems to be counted as a noncontributing building. On page 16 the guest house is classified as noncontributing. If they are both noncontributing, the figure in Section 5 should be 2 noncontributing buildings. Thus, there should be seven contributing structures, not eight, and the totals are thirteen contributing and three noncontributing, for a total of 16.

- *Corrected with the Warehouse as a contributing feature.*

Section 7. Please describe how the ranch appeared historically: were the 300 acres mostly crop land and pastures? How did the land divisions appear? Where was the building complex in relation to the rest of the 300 acres? Could the 1937 survey plat map mentioned in Section 8 be included in this nomination? The guidelines in Bulletin 16 state that district descriptions should include the appearance of the district during the time when it achieved significance. In this case, the entire ranch should be described *generally*, with more detailed descriptions for the nominated complex. The Section 8 description of crops and livestock raised helps with development of an historic image. Please see page 33, especially the sections about "Architectural and Historic Districts" and Rural Districts.

- *Additional information about the historical extent and character of the ranch has been added, as well as images of the 1918 and 1930 plat maps, which show the largest extent of the ranch at its height.*

The Northwest Field is considered a contributing site (p. 26), but the cover document does not explain well how integrity is evaluated. This piece of land is essential to the nominated property, as the only remaining land outside of the building complex, but it might be reconsidered as a contributing site, because its integrity seems compromised. It is only 1 acre, while it was 9 acres historically. Formerly

cropland for barley and alfalfa, it is now a berry field, although the nomination points out that portions of the historic alfalfa field are evident and agriculture is still carried out. These are important factors, but consider if the entire Lampe property could be considered a contributing site, rather than only this field remnant. There may be reasons you believe this is not the case.

- *Per the recommendation above, the landscape of the complex has been combined into a single site, with the Northwest Field identified as an "Historic Associated Feature."*

Integrity. The integrity of the complex itself seems good, but the encroaching development has a severe impact on integrity in regard to the area of significance "Agriculture" under Criterion A. Please describe—if relevant—the transcendent importance of this intact complex (and the house and barn), which may override the lack of integrity of the broader setting and the lack of agricultural land.

- *The integrity statement has been re-seated to more forwardly address the impositions of suburban development on the vast majority of the historic ranch complex. To convey the "transcendent" importance of the ranch, the statement of significance has been strengthened to include the Industry Area of Significance, to emphasize the rarity of the Creamery as part of the Lampe operation. Reconnaissance survey and research identified only two other surviving creameries, both of which were owned cooperatively for regional production. The Lampe Creamery appears to be an extremely rare (and only recorded surviving) example of a small-scale, individual, creamery operation in the study area.*

If you have any questions about the changes or contents of this re-transmittal, please contact Jim Bertolini, National Register Coordinator, at (775) 684-3436 or jbertolini@shpo.nv.gov

Sincerely,

Rebecca Palmer
State Historic Preservation Officer
Nevada SHPO
(775) 684-3443
rlpalmer@shpo.nv.gov

NEVADA
STATE HISTORIC PRESERVATION OFFICE

Department of Conservation and Natural Resources
Brian Sandoval, Governor
Bradley Crowell, Director
Rebecca L. Palmer, Administrator, SHPO

April 30, 2018

Barbara Wyatt, ASLA
National Register/NHL Programs
National Park Service
1201 Eye Street NW
Washington, DC 20005

RE: Re-transmittal of Multiple Property Documentation Form MC 100001619, *Agriculture on the Carson River in Nevada's Douglas and Ormsby Counties*

Ms. Wyatt,

Per your e-mail of April 20, enclosed is a CD for the above-referenced MPDF, *Agriculture on the Carson River in Nevada's Douglas and Ormsby Counties* (MC 100001619), approved by the Keeper on March 30, and included on the nomination disk for the Wilhelm & William Lampe Ranch (RS 100001620).
If you have any questions about the changes or contents of this re-transmittal, please contact me at (775) 684-3436 or jbertolini@shpo.nv.gov

Sincerely,

Jim Bertolini
National Register Coordinator

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